V 37UD Hamann

09-17-2004

City of Carlsbad

1635 Faraday Av Carlsbad, CA 92008

Plan Check Revision

Permit No:PCR04115

Building Inspection Request Line (760) 602-2725

Job Address:	6030 AVENIDA ENCINAS CBAD				
Permit Type:	PCR			Status:	ISSUED
Parcel No:		Lot #:	0	Applied:	07/13/2004
Valuation:	$0.00	Construction Type:	NEW	Entered By:	RMA
Reference #:				Plan Approved:	09/17/2004
				Issued:	09/17/2004
Project Title:	TOYOTA-STEEL CAR PORT-DEFERRED SUBMITTAL			Inspect Area:	

Applicant:
HAMANN CONST.

475 W. BRADLEY AV
EL CAJON, CA 92020

Owner:

Plan Check Revision Fee	$240.00
Additional Fees	$0.00

Total Fees:	$240.00	Total Payments To Date:	$0.00	**Balance Due:**	**$240.00**

1396 09/17/04 0002 01 02
CGP 240.00

FINAL APPROVAL

Inspector: _____ Date: _____ Clearance: _____

NOTICE: Please take NOTICE that approval of your project includes the "Imposition" of fees, dedications, reservations, or other exactions hereafter collectively referred to as "fees/exactions." You have 90 days from the date this permit was issued to protest imposition of these fees/exactions. If you protest them, you must follow the protest procedures set forth in Government Code Section 66020(a), and file the protest and any other required information with the City Manager for processing in accordance with Carlsbad Municipal Code Section 3.32.030. Failure to timely follow that procedure will bar any subsequent legal action to attack, review, set aside, void, or annul their imposition.

You are hereby FURTHER NOTIFIED that your right to protest the specified fees/exactions DOES NOT APPLY to water and sewer connection fees and capacity changes, nor planning, zoning, grading or other similar application processing or service fees in connection with this project. NOR DOES IT APPLY to any fees/exactions of which you have previously been given a NOTICE similar to this, or as to which the statute of limitations has previously otherwise expired.

PERMIT APPLICATION orig CB040907

CITY OF CARLSBAD BUILDING DEPARTMENT
1635 Faraday Ave., Carlsbad, CA 92008

FOR OFFICE USE ONLY
PLAN CHECK NO. PCR04115
EST. VAL. _____
Plan Ck. Deposit _____
Validated By RA
Date 7/13/04

1. PROJECT INFORMATION

6030 Ave Encinas — TOYOTA — CARLSBAD
Address (include Bldg/Suite #) | Business Name (at this address)

Legal Description | Lot No. | Subdivision Name/Number | Unit No. | Phase No. | Total # of units

Assessor's Parcel # | Existing Use | Proposed Use

Description of Work: STEEL CARPORT - deferred submittal | SQ. FT. | # of Stories | # of Bedrooms | # of Bathrooms

2. CONTACT PERSON (if different from applicant)

REBECA MULLEN | 1000 Pioneer Way | El Cajon | 92020 | (619) 440-7424 | [illegible]
Name | Address | City | State/Zip | Telephone # | Fax #

3. APPLICANT ☒ Contractor ☐ Agent for Contractor ☐ Owner ☐ Agent for Owner

Name | Address | City | State/Zip | Telephone #

4. PROPERTY OWNER

Name | Address | City | State/Zip | Telephone #

5. CONTRACTOR'S COMPANY NAME

(Sec. 7031.5 Business and Professions Code: Any City or County which requires a permit to construct, alter, improve, demolish or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law [Chapter 9, commending with Section 7000 of Division 3 of the Business and Professions Code] or that he is exempt therefrom, and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars [$500]).

Hamann Construction | 1000 Pioneer Way | El Cajon | 92020 | (619) 440-7424
Name | Address | City | State/Zip | Telephone #

State License # 373142 | License Class A & B | City Business License # 94739

M Barr C Carport | 724 Barsby | Vista | 92084 | (760) 758-0351
Designer Name | Address | City | State/Zip | Telephone

State License # 465534

6. WORKERS' COMPENSATION

Workers' Compensation Declaration: I hereby affirm under penalty of perjury one of the following declarations:

☐ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

☐ I have and will maintain workers' compensation, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My worker's compensation insurance carrier and policy number are:

Insurance Company Liberty Mutual | Policy No. WC2-161-031654-731 | Expiration Date 12/01/04

(THIS SECTION NEED NOT BE COMPLETED IF THE PERMIT IS FOR ONE HUNDRED DOLLARS [$100] OR LESS)

☐ **CERTIFICATE OF EXEMPTION:** I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California.

WARNING: Failure to secure workers' compensation coverage is unlawful, and shall subject an employer to criminal penalties and civil fines up to one hundred thousand dollars ($100,000), in addition to the cost of compensation, damages as provided for in Section 3706 of the Labor code, interest and attorney's fees.

SIGNATURE Rebeca Mullen | DATE 7/13/04

7. OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason:

☐ *I, as owner of the property or my employees with wages as their sole compensation, will do the work and the structure is not intended or offered for sale* (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is *sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).*

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and contracts for such projects with contractor(s) licensed pursuant to the Contractor's License Law).

☐ I am exempt under Section _____ Business and Professions Code for this reason:

1. I personally plan to provide the major labor and materials for construction of the proposed property improvement. ☐ YES ☐ NO
2. I (have / have not) signed an application for a building permit for the proposed work.
3. *I have contracted with the following person (firm) to provide the proposed construction (include name / address / phone number / contractors license number):* _____
4. I plan to provide portions of the work, but I have hired the following person to coordinate, supervise and provide the major work (include name / address / phone number / contractors license number): _____
5. I will provide some of the work, but I have contracted (hired) the following persons to provide the work indicated (include name / address / phone number / type of work): _____

PROPERTY OWNER SIGNATURE _____ DATE _____

COMPLETE THIS SECTION FOR *NON-RESIDENTIAL* BUILDING PERMITS ONLY

Is the applicant or future building occupant required to submit a business plan, acutely hazardous materials registration form or risk management and prevention program under Sections 25505, 25533 or 25534 of the Presley-Tanner Hazardous Substance Account Act? ☐ YES ☐ NO

Is the applicant or future building occupant required to obtain a permit from the air pollution control district or air quality management district? ☐ YES ☐ NO

Is the facility to be constructed within 1,000 feet of the outer boundary of a school site? ☐ YES ☐ NO

IF ANY OF THE ANSWERS ARE YES, A FINAL CERTIFICATE OF OCCUPANCY MAY NOT BE ISSUED UNLESS THE APPLICANT HAS MET OR IS MEETING THE REQUIREMENTS OF THE OFFICE OF EMERGENCY SERVICES AND THE AIR POLLUTION CONTROL DISTRICT.

8. CONSTRUCTION LENDING AGENCY

I hereby affirm that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097(i) Civil Code).

LENDER'S NAME _____ LENDER'S ADDRESS _____

9. APPLICANT CERTIFICATION

I certify that I have read the application and state that the above information is correct and that the information on the plans is accurate. I agree to comply with all City ordinances and State laws relating to building construction. I hereby authorize representatives of the City of Carlsbad to enter upon the above mentioned property for inspection purposes. **I ALSO AGREE TO SAVE, INDEMNIFY AND KEEP HARMLESS THE CITY OF CARLSBAD AGAINST ALL LIABILITIES, JUDGMENTS, COSTS AND EXPENSES WHICH MAY IN ANY WAY ACCRUE AGAINST SAID CITY IN CONSEQUENCE OF THE GRANTING OF THIS PERMIT.**

OSHA: An OSHA permit is required for excavations over 5'0" deep and demolition or construction of structures over 3 stories in height.

EXPIRATION: Every permit issued by the building Official under the provisions of this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days (Section 106.4.4 Uniform Building Code).

APPLICANT'S SIGNATURE Rebeca Mullen | DATE 07/13/04

WHITE: File YELLOW: Applicant PINK: Finance

EsGil Corporation

In Partnership with Government for Building Safety

DATE: **August 24, 2004**

JURISDICTION: **Carlsbad**

- ☐ APPLICANT
- ☐ JURIS.
- ☐ PLAN REVIEWER
- ☐ FILE

PLAN CHECK NO.: **040907 Rev 1 (PCR04115)** SET: **III**

PROJECT ADDRESS: **6030 Avenida Encinas**

PROJECT NAME: **STEEL CANOPIES (Toyota Carlsbad0**

☒ The plans transmitted herewith have been corrected where necessary and substantially comply with the jurisdiction's building codes.

☐ The plans transmitted herewith will substantially comply with the jurisdiction's building codes when minor deficiencies identified below are resolved and checked by building department staff.

☐ The plans transmitted herewith have significant deficiencies identified on the enclosed check list and should be corrected and resubmitted for a complete recheck.

☐ The check list transmitted herewith is for your information. The plans are being held at Esgil Corporation until corrected plans are submitted for recheck.

☐ The applicant's copy of the check list is enclosed for the jurisdiction to forward to the applicant contact person.

☐ The applicant's copy of the check list has been sent to:

☒ Esgil Corporation staff **did not** advise the applicant that the plan check has been completed.

☐ Esgil Corporation staff **did** advise the applicant that the plan check has been completed.

Person contacted: Telephone #:

Date contacted: (by:) Fax #:

Mail Telephone Fax In Person

☐ REMARKS:

By: **Abe Doliente** Enclosures:

Esgil Corporation

☐ GA ☐ MB ☐ EJ ☐ PC 8/23/04 trnsmti.dot

EsGil Corporation

In Partnership with Government for Building Safety

DATE: **August 3, 2004**

JURISDICTION: **Carlsbad**

☐ APPLICANT
☑ JURIS.
☐ PLAN REVIEWER
☐ FILE

PLAN CHECK NO.: **040907 Rev 1 (PCR04115)** SET: **II**

PROJECT ADDRESS: **6030 Avenida Encinas**

PROJECT NAME: **STEEL CANOPIES**

☐ The plans transmitted herewith have been corrected where necessary and substantially comply with the jurisdiction's building codes.

☐ The plans transmitted herewith will substantially comply with the jurisdiction's building codes when minor deficiencies identified below are resolved and checked by building department staff.

☐ The plans transmitted herewith have significant deficiencies identified on the enclosed check list and should be corrected and resubmitted for a complete recheck.

☒ The check list transmitted herewith is for your information. The plans are being held at Esgil Corporation until corrected plans are submitted for recheck.

☐ The applicant's copy of the check list is enclosed for the jurisdiction to forward to the applicant contact person.

☒ The applicant's copy of the check list has been sent to:
Hamann Construction
1000 Pioneer Way, El Cajon, CA 92020

☐ Esgil Corporation staff **did not** advise the applicant that the plan check has been completed.

☒ Esgil Corporation staff **did** advise the applicant that the plan check has been completed.

Person contacted: Rebecca Telephone #: ~~619/440-7424~~ wrong #?

Date ~~contacted~~ attempted: 8-4-04 (by: BM) Fax #: (619) 440-8914

Mail ✓ Telephone Fax ✓ In Person

☐ REMARKS:

By: **Abe Doliente** Enclosures:
Esgil Corporation

☐ GA ☐ MB ☐ EJ ☐ PC 7/27/04 trnsmtl.dot

Carlsbad 040907 Rev 1 (PCR04115)
August 3, 2004

RECHECK PLAN CORRECTION LIST

JURISDICTION: **Carlsbad (PCR04115)**	PLAN CHECK NO.: **040907 Rev 1**
PROJECT ADDRESS: **6030 Avenida Encinas**	SET: **II**
DATE PLAN RECEIVED BY ESGIL CORPORATION: 7/27/04	DATE RECHECK COMPLETED: **August 3, 2004**
REVIEWED BY: **Abe Doliente**	

FOREWORD (PLEASE READ):

This plan review is limited to the technical requirements contained in the Uniform Building Code, Uniform Plumbing Code, Uniform Mechanical Code, National Electrical Code and state laws regulating energy conservation, noise attenuation and disabled access. This plan review is based on regulations enforced by the Building Department. You may have other corrections based on laws and ordinances enforced by the Planning Department, Engineering Department or other departments.

The following items listed need clarification, modification or change. All items must be satisfied before the plans will be in conformance with the cited codes and regulations. Per Sec. 106.4.3, 1997 Uniform Building Code, the approval of the plans does not permit the violation of any state, county or city law.

A. Please make all corrections on the original tracings and submit two new sets of prints to: Esgil Corp. or to the bldg. dept. of the juris.

B. **To facilitate rechecking, please identify, next to each item, the sheet of the plans upon which each correction on this sheet has been made and return this sheet with the revised plans.**

C. The following items have not been resolved from the previous plan reviews. The original correction number has been given for your reference. In case you did not keep a copy of the prior correction list, we have enclosed those pages containing the outstanding corrections. Please contact me if you have any questions regarding these items.

D. Please indicate here if any changes have been made to the plans that are not a result of corrections from this list. If there are other changes, please briefly describe them and where they are located on the plans. Have changes been made not resulting from this list?

❑Yes ❑No

Carlsbad 040907 Rev 1 (PCR04115)
August 3, 2004

1. The addition of these steel canopies will affect the allowable area for building A. Revise the allowable area calculation. When a building has more than one occupancy, the area of the building shall be such that the sum of the rations of the actual area for each separate occupancy divided by the total allowable area for each separate occupancy shall not exceed one.

The jurisdiction has contracted with Esgil Corporation located at 9320 Chesapeake Drive, Suite 208, San Diego, California 92123; telephone number of 858/560-1468, to perform the plan review for your project. If you have any questions regarding these plan review items, please contact **Abe Doliente** at Esgil Corporation. Thank you.

EsGil Corporation

In Partnership with Government for Building Safety

DATE: **July 26, 2004**

JURISDICTION: **Carlsbad**

- ☐ APPLICANT
- ☐ JURIS
- ☐ PLAN REVIEWER
- ☐ FILE

PLAN CHECK NO.: **040907 Rev 1 (PCR04115)** SET: **I**

PROJECT ADDRESS: **6030 Avenida Encinas**

PROJECT NAME: **STEEL CANOPIES** (TOYOTA CARLSBAD)

☐ The plans transmitted herewith have been corrected where necessary and substantially comply with the jurisdiction's building codes.

☐ The plans transmitted herewith will substantially comply with the jurisdiction's building codes when minor deficiencies identified below are resolved and checked by building department staff.

☐ The plans transmitted herewith have significant deficiencies identified on the enclosed check list and should be corrected and resubmitted for a complete recheck.

☒ The check list transmitted herewith is for your information. The plans are being held at Esgil Corporation until corrected plans are submitted for recheck.

☐ The applicant's copy of the check list is enclosed for the jurisdiction to forward to the applicant contact person.

☒ The applicant's copy of the check list has been sent to:
Hamann Construction
1000 Pioneer Way, El Cajon, CA 92020

☐ Esgil Corporation staff **did not** advise the applicant that the plan check has been completed.

☒ Esgil Corporation staff **did** advise the applicant that the plan check has been completed.

Person contacted: Rebecca Telephone #: 619/440-7424

Date contacted: 7/26/04 (by: K) Fax #: (619) 440.8914.

Mail ~~Telephone~~ ✓ Fax ✓ In Person

☐ REMARKS:

By: **Abe Doliente** Enclosures:
Esgil Corporation

☐ GA ☐ MB ☐ EJ ☐ PC 7/15/04 trnsmtl.dot

Carlsbad 040907 Rev 1 (PCR04115)
July 26, 2004

GENERAL PLAN CORRECTION LIST

JURISDICTION: **Carlsbad (PCR04115)**	PLAN CHECK NO.: **040907 Rev 1**
PROJECT ADDRESS: **6030 Avenida Encinas**	
DATE PLAN RECEIVED BY ESGIL CORPORATION: 7/15/04	DATE REVIEW COMPLETED: **July 26, 2004**
REVIEWED BY: **Abe Doliente**	

FOREWORD (PLEASE READ):

This plan review is limited to the technical requirements contained in the Uniform Building Code, Uniform Plumbing Code, Uniform Mechanical Code, National Electrical Code and state laws regulating energy conservation, noise attenuation and disabled access. This plan review is based on regulations enforced by the Building Department. You may have other corrections based on laws and ordinances enforced by the Planning Department, Engineering Department or other departments.

The following items listed need clarification, modification or change. All items must be satisfied before the plans will be in conformance with the cited codes and regulations. Per Sec. 106.4.3, 1997 Uniform Building Code, the approval of the plans does not permit the violation of any state, county or city law.

- Please make all corrections on the originals and submit three new *complete* sets of prints to: Esgil Corp. or to the bldg. dept. of the juris.
- **To facilitate rechecking, please identify, next to each item, the sheet of the plans upon which each correction on this sheet has been made and return this sheet with the revised plans.**
- Please indicate here if any changes have been made to the plans that are not a result of corrections from this list. If there are other changes, please briefly describe them and where they are located on the plans. Have changes been made not resulting from this list?

  ☐ Yes ☐ No

Carlsbad 040907 Rev 1 (PCR04115)
July 26, 2004

1. Provide a site plan showing the location of these two canopies. They must be clearly dimensioned from the property lines and from the existing adjacent buildings.

2. All sheets of the plans must be signed by the Architect or Engineer of record.

3. The jurisdiction has contracted with Esgil Corporation located at 9320 Chesapeake Drive, Suite 208, San Diego, California 92123; telephone number of 858/560-1468, to perform the plan review for your project. If you have any questions regarding these plan review items, please contact **Abe Doliente** at Esgil Corporation. Thank you.

Carlsbad 040907 Rev 1 (PCR04115)
July 26, 2004

VALUATION AND PLAN CHECK FEE

JURISDICTION: **Carlsbad (PCR04115)**

PLAN CHECK NO.: **040907 Rev 1**

PREPARED BY: **Abe Doliente**

DATE: **July 26, 2004**

BUILDING ADDRESS: **6030 Avenida Encinas**

BUILDING OCCUPANCY: U-1

TYPE OF CONSTRUCTION: V-N

BUILDING PORTION	AREA (Sq. Ft.)	Valuation Multiplier	Reg. Mod.	VALUE ($)	
Canopy 1	1640	25.00			41,000
Canopy 2	460	25.00			11,500
Air Conditioning					
Fire Sprinklers					
TOTAL VALUE					52,500

Jurisdiction Code	cb	By Ordinance

Bldg. Permit Fee by Ordinance **$356.61**

Plan Check Fee by Ordinance **$231.80**

Type of Review: ☑ **Complete Review** ☐ Structural Only

☐ Repetitive Fee
Repeats

☐ Other
☐ Hourly ____ Hour *
Esgil Plan Review Fee **$199.70**

Comments:

City of Carlsbad

Public Works – Engineering

BUILDING PLANCHECK CHECKLIST

DATE: 8/4/04 PLANCHECK NO.: PCR 04-115 CB

BUILDING ADDRESS: 6030 Avenida Encinas

PROJECT DESCRIPTION: Carport

ASSESSOR'S PARCEL NUMBER: _____ EST. VALUE: _____

ENGINEERING DEPARTMENT

APPROVAL

The item you have submitted for review has been approved. The approval is based on plans, information and/or specifications provided in your submittal; therefore any changes to these items after this date, including field modifications, must be reviewed by this office to insure continued conformance with applicable codes. Please review carefully all comments attached, as failure to comply with instructions in this report can result in suspension of permit to build.

☐ A Right-of-Way permit is required prior to construction of the following improvements:

_____

_____

_____

DENIAL

Please see the attached report of deficiencies marked with ☐. Make necessary corrections to plans or specifications for compliance with applicable codes and standards. Submit corrected plans and/or specifications to this office for review.

By: K Farmer Date: 8/4/04

By: _____ Date: _____

By: _____ Date: _____

FOR OFFICIAL USE ONLY

ENGINEERING AUTHORIZATION TO ISSUE BUILDING PERMIT:

By: _____ Date: 9/9/04

ATTACHMENTS

- ☐ Dedication Application
- ☐ Dedication Checklist
- ☐ Improvement Application
- ☐ Improvement Checklist
- ☐ Future Improvement Agreement
- ☐ Grading Permit Application
- ☐ Grading Submittal Checklist
- ☐ Right-of-Way Permit Application
- ☐ Right-of-Way Permit Submittal Checklist and Information Sheet
- ☐ Sewer Fee Information Sheet

ENGINEERING DEPT. CONTACT PERSON

Name: KATHLEEN M. FARMER

City of Carlsbad

Address: 1635 Faraday Avenue, Carlsbad, CA 92008

Phone: (760) 602-2741

CFD INFORMATION

Parcel Map No: _____

Lots: _____

Recordation: _____

Carlsbad Tract: _____

H:\WORD\DOCS\FORMS\Building Plancheck Cover Form (Generic).doc 1635 Faraday Avenue • Carlsbad, CA 92008-7314 • (760) 602-2720 • FAX (760) 602-8562

BUILDING PLANCHECK CHECKLIST

SITE PLAN

1ST	2ND	3RD	
☐	☐	☐	1. Provide a fully dimensioned site plan drawn to scale. Show: Show Proposed and existing structures.

A. North Arrow
B. Existing & Proposed Structures
C. ~~Existing Street Improvements~~
D. Property Lines
E. Easements
~~F. Right-of-Way Width~~ & Adjacent Streets
~~G. Driveway~~ widths
~~H. Existing or~~ proposed sewer lateral
~~I. Existing or~~ proposed water service
~~J. Existing~~ or proposed irrigation service

☐ ☐ ☐ 2. Show on site plan:

A. Drainage Patterns
   1. Building pad surface drainage must maintain a minimum slope of one percent towards an adjoining street or an approved drainage course.
   2. ADD THE FOLLOWING NOTE: "Finish grade will provide a minimum positive drainage of 2% to swale 5' away from building."
B. Existing & Proposed Slopes and Topography
C. Size, type, location, alignment of existing or proposed sewer and water service (s) that serves the project. Each unit requires a separate service, however, second dwelling units and apartment complexes are an exception.
D. Sewer and water laterals should not be located within proposed driveways, per standards.

☐ ☐ ☐ 3. Include on title sheet:

A. Site address
B. Assessor's Parcel Number
C. Legal Description

For commercial/industrial buildings and tenant improvement projects, include: total building square footage with the square footage for each different use, existing sewer permits showing square footage of different uses (manufacturing, warehouse, office, etc.) previously approved.

EXISTING PERMIT NUMBER	DESCRIPTION

BUILDING PLANCHECK CHECKLIST

1ST 2ND 3rd **DISCRETIONARY APPROVAL COMPLIANCE**

☐ ☒ ☐ 4a. Project does not comply with the following Engineering Conditions of approval for Project No._____

_____

_____

_____

_____

☐ ☐ ☐ 4b. All conditions are in compliance. Date: _____

DEDICATION REQUIREMENTS

☐ ☒ 5. Dedication for all street Rights-of-Way adjacent to the building site and any storm drain or utility easements on the building site is required for all new buildings and for remodels with a value at or exceeding $15,000, pursuant to Carlsbad Municipal Code Section 18.40.030.

Dedication required as follows: _____

_____

_____

Dedication required. Please have a registered Civil Engineer or Land Surveyor prepare the appropriate legal description together with an 8 ½" x 11" plat map and submit with a title report. All easement documents must be approved and signed by owner(s) prior to issuance of Building Permit. Attached please find an application form and submittal checklist for the dedication process. Submit the completed application form with the required checklist items and fees to the Engineering Department in person. Applications will not be accept by mail or fax.

Dedication completed by: _____ Date: _____

IMPROVEMENT REQUIREMENTS

☐ ☐ 6a. All needed public improvements upon and adjacent to the building site must be constructed at time of building construction whenever the value of the construction exceeds $75,000, pursuant to Carlsbad Municipal Code Section 18.40.040.

Public improvements required as follows: _____

_____

_____

Attached please find an application form and submittal checklist for the public improvement requirements. A registered Civil Engineer must prepare the appropriate improvement plans and submit them together with the requirements on the attached checklist to the Engineering Department through a separate plan check process. The completed application form and the requirements on the

1ST 2ND 3RD

checklist must be submitted in person. Applications by mail or fax are not accepted. Improvement plans must be approved, appropriate securities posted and fees paid prior to issuance of building permit.

Improvement Plans signed by: _____ Date: _____

☐ ☐ ☐ 6b. Construction of the public improvements may be deferred pursuant to Carlsbad Municipal Code Section 18.40. Please submit a recent property title report or current grant deed on the property and processing fee of $310 so we may prepare the necessary Future Improvement Agreement. This agreement must be signed, notarized and approved by the City prior to issuance of a Building permit.

Future public improvements required as follows: _____

_____

_____

☐ ☐ ☐ 6c. Enclosed please find your Future Improvement Agreement. Please return agreement signed and notarized to the Engineering Department.

Future Improvement Agreement completed by: _____
Date: _____

☐ ☐ ☐ 6d. No Public Improvements required. SPECIAL NOTE: Damaged or defective improvements found adjacent to building site must be repaired to the satisfaction of the City Inspector prior to occupancy.

GRADING PERMIT REQUIREMENTS

The conditions that invoke the need for a grading permit are found in Section 11.06.030 of the Municipal Code.

☐ ☐ ☐ 7a. Inadequate information available on Site Plan to make a determination on grading requirements. Include accurate grading quantities (cut, fill import, export).

☐ ☐ ☐ 7b. Grading Permit required. A separate grading plan prepared by a registered Civil Engineer must be submitted together with the completed application form attached. NOTE: The Grading Permit must be issued and rough grading approval obtained prior to issuance of a Building Permit.

Grading Inspector sign off by: _____ Date: _____

☐ ☐ ☐ 7c. Graded Pad Certification required. (Note: Pad certification may be required even if a grading permit is not required.)

BUILDING PLANCHECK CHECKLIST

1ST	2ND	3RD	
☐	☐	☐	7d .No Grading Permit required.
☐	☐	☐	7e. If grading is not required, write "No Grading" on plot plan.

MISCELLANEOUS PERMITS

☐	☐	☐	8. A **RIGHT-OF-WAY PERMIT** is required to do work in City Right-of-Way and/or private work adjacent to the public Right-of-Way. Types of work include, but are not limited to: street improvements, tree trimming, driveway construction, tying into public storm drain, sewer and water utilities. Right-of-Way permit required for: _____ _____ _____
☐	☐	☐	9. **INDUSTRIAL WASTE PERMIT** If your facility is located in the City of Carlsbad sewer service area, you need to contact the Carlsbad Municipal Water District, located at 5950 El Camino Real, Carlsbad, CA 92008. District personnel can provide forms and assistance, and will check to see if your business enterprise is on the EWA Exempt List. You may telephone (760) 438-2722, extension 7153, for assistance. Industrial Waste permit accepted by: _____ Date: _____
☐	☐	☐	10. **NPDES PERMIT** Complies with the City's requirements of the National Pollutant Discharge Elimination System (NPDES) permit. The applicant shall provide best management practices to reduce surface pollutants to an acceptable level prior to discharge to sensitive areas. Plans for such improvements shall be approved by the City Engineer prior to issuance of grading or building permit, whichever occurs first.
☑	☐	☐	11. ☐ Required fees are attached ☑ No fees required – fees on original bldg permit

WATER METER REVIEW

☐	☐	☐	12a. Domestic (potable) Use Ensure that the meter proposed by the owner/developer is not oversized. Oversized meters are inaccurate during low-flow conditions. If it is oversized, for the life of the meter, the City will not accurately bill the owner for the water used. • All single family dwelling units received "standard" 1" service with 5/8" service.

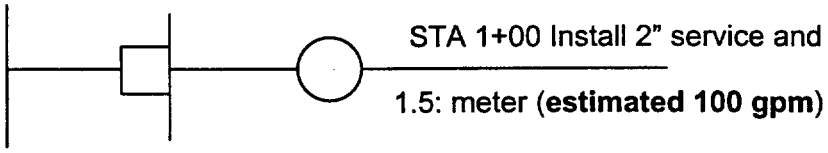
1ST 2ND 3RD

- If owner/developer proposes a size other than the "standard", then owner/developer must provide **potable water demand calculations,** which include total fixture counts and maximum water demand in gallons per minute (gpm). A typical fixture count and water demand worksheet is attached. Once the gpm is provided, check against the "meter sizing schedule" to verify the anticipated meter size for the unit.
- **Maximum** service and meter size is a 2" service with a 2" meter.
- If a developer is proposing a meter greater than 2", suggest the installation of multiple 2" services as needed to provide the anticipated demand. (manifolds are considered on case by case basis to limit multiple trenching into the street).

☐ ☐ ☐ 12b. Irrigation Use (where recycled water is **not** available)

All **irrigation meters** must be sized via irrigation calculations (in gpm) prior to approval. The developer must provide these calculations. Please follow these guidelines:

1. If the project is a newer development (newer than 1998), check the recent improvement plans and observe if the new irrigation service is reflected on the improvement sheets. If so, at the water meter station, the demand in gpm may be listed there. Irrigation services are listed with a circled "I", and potable water is typically a circled "W". The irrigation service should look like:



2. If the improvement plans do **not** list the irrigation meter and the service/meter will be installed via another instrument such as the building plans or grading plans (w/ a right of way permit of course), then the applicant must provide **irrigation calculations** for estimated worst-case irrigation demand (largest zone with the farthest reach). Typically, Larry Black has already reviewed this if landscape plans have been prepared, but the applicant must provide the calculations to you for your use. Once you have received a good example of irrigation calculations, keep a set for your reference. In general the calculations will include:

    - Hydraulic grade line
    - Elevation at point of connection (POC)
    - Pressure at POC in pounds per square inch (PSI)
    - Worse case zone (largest, farthest away from valve
    - Total Sprinkler heads listed (with gpm use per head)
    - Include a 10% residual pressure at point of connection

3. In general, all major sloped areas of a subdivision/project are to be irrigated via separate irrigation meters (unless the project is only SFD with no HOA). As long as the project is located within the City recycled water

1ST 2ND 3RD

service boundary, the City intends on switching these irrigation services/meters to a new recycled water line in the future.

☐ ☐ ☐ 12c. Irrigation Use (where recycled water **is** available)

1. Recycled water meters are sized the same as the irrigation meter above.

2. If a project fronts a street with recycled water, then they should be connecting to this line to irrigate slopes within the development. For subdivisions, this should have been identified, and implemented on the improvement plans. Installing **recycled water meters** is a benefit for the applicant since they **are exempt** from paying the San Diego County Water Capacity fees. However, if they front a street which the recycled water is there, but is not live (sometimes they are charged with potable water until recycled water is available), then the applicant must pay the San Diego Water Capacity Charge. If within three years, the recycled water line is charged with recycled water by CMWD, then the applicant can apply for a refund to the San Diego County Water Authority (SDCWA) for a refund. However, let the applicant know that we cannot guarantee the refund, and they must deal with the SDCWA for this.

☐ ☐ ☐ 13. **Additional Comments:**

ENGINEERING DEPARTMENT

FEE CALCULATION WORKSHEET

☐ Estimate based on unconfirmed information from applicant.
☐ Calculation based on building plancheck plan submittal.

Address: _____ Bldg. Permit No._____

Prepared by:_____ Date: _____ Checked by: _____ Date: _____

EDU CALCULATIONS: List types and square footages for all uses.

Types of Use: _____ Sq. Ft./Units:_____ EDU's: _____

Types of Use: _____ Sq. Ft./Units:_____ EDU's: _____

ADT CALCULATIONS: List types and square footages for all uses.

Types of Use: _____ Sq. Ft./Units: _____ ADT's: _____

Types of Use: _____ Sq. Ft./Units: _____ ADT's: _____

FEES REQUIRED:

WITHIN CFD: ☐ YES (no bridge & thoroughfare fee in District #1, reduced Traffic Impact Fee) ☐ NO

☐ 1. PARK-IN-LIEU FEE PARK AREA & #: _____

FEE/UNIT:_____ X NO. UNITS:_____ = $_____

☐ 2. TRAFFIC IMPACT FEE

ADT's/UNITS: _____ X FEE/ADT: _____ = $_____

☐ 3. BRIDGE AND THOROUGHFARE FEE (DIST. #1 ____ DIST. #2 ____ DIST. #3 ____)

ADT's/UNITS:_____ X FEE/ADT:_____ = $_____

☐ 4. FACILITIES MANAGEMENT FEE ZONE:_____

UNIT/SQ.FT.:_____ X FEE/SQ.FT./UNIT:_____ = $_____

☐ 5. SEWER FEE

EDU's: _____ X FEE/EDU:_____ = $_____

BENEFIT AREA: _____

EDU's: _____ X FEE/EDU:_____ = $_____

☐ 6. SEWER LATERAL ($2,500) = $_____

☐ 7. DRAINAGE FEES PLDA_____: HIGH _____ /LOW_____

ACRES: _____ X FEE/AC:_____ = $_____

☐ 8. POTABLE WATER FEES

UNITS	CODE	CONNECTION FEE	METER FEE	SDCWA FEE	IRRIGATION
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

PLANNING DEPARTMENT
BUILDING PLAN CHECK REVIEW CHECKLIST

Plan Check No. CB PCR04115 Address 6030 Avd. Encinas

Planner Greg Fisher Phone (760) 602- 4629

APN: _____

Type of Project & Use: _____ Net Project Density: _____ DU/AC

Zoning: M General Plan: PI Facilities Management Zone: 3

CFD (in/out) #_Date of participation: _____ Remaining net dev acres: _____

Circle One (For non-residential development: Type of land used created by this permit: _____)

Plan Check #1 by _____ Date 12/6/04
Plan Check #2 by _____ Date 8/5/04
Plan Check #3 by _____ Date _____

Legend: ☒ Item Complete ☐ Item Incomplete - Needs your action

☒ ☐ ☐ **Environmental Review Required:** YES ___ NO ___ TYPE _____

DATE OF COMPLETION: _____

Compliance with conditions of approval? If not, state conditions which require action.
Conditions of Approval: _____

☒ ☐ ☐ **Discretionary Action Required:** YES ___ NO ___ TYPE _____

APPROVAL/RESO. NO. _____ DATE _____

PROJECT NO. _____

OTHER RELATED CASES: _____

Compliance with conditions or approval? If not, state conditions which require action.

Conditions of Approval: _____

_____

_____

☒ ☐ ☐ **Coastal Zone Assessment/Compliance**

Project site located in Coastal Zone? YES___ NO___

CA Coastal Commission Authority? YES___ NO___

If California Coastal Commission Authority: Contact them at – 7575 Metropolitan Drive, Suite 103, San Diego CA 92108-4402; (619) 767-2370

Determine status (Coastal Permit Required or Exempt): _____

Coastal Permit Determination Form already completed? YES___ NO___

If NO, complete Coastal Permit Determination Form now.

Coastal Permit Determination Log #: _____

Follow-Up Actions:

1) Stamp Building Plans as "Exempt" or "Coastal Permit Required" (at minimum Floor Plans).
2) Complete Coastal Permit Determination Log as needed.

☒ ☐ ☐ **Inclusionary Housing Fee required:** YES ___ NO ___
(Effective date of Inclusionary Housing Ordinance - May 21, 1993.)

Data Entry Completed? YES ___ NO ___
(A/P/Ds, Activity Maintenance, enter CB#, toolbar, Screens, Housing Fees, Construct Housing Y/N, Enter Fee, UPDATE!)

Site Plan:

☐ ☐ ☐ 1. Provide a fully dimensional site plan drawn to scale. Show: North arrow, property lines, easements, existing and proposed structures, streets, existing street improvements, right-of-way width, dimensional setbacks and existing topographical lines (including all side and rear yard slopes).

☐ ☐ ☐ 2. Provide legal description of property and assessor's parcel number.

Policy 44 – Neighborhood Architectural Design Guidelines

☒ ☐ ☐ 1. Applicability: YES_____NO_____

☑ ☐ ☐ 2. Project complies YES_____NO_____

Zoning:

☐ ☐ ☐ 1. Setbacks:

Front:	Required	_____	Shown	_____
Interior Side:	Required	_____	Shown	_____
Street Side:	Required	_____	Shown	_____
Rear:	Required	_____	Shown	_____
Top of slope:	Required	_____	Shown	_____

☐ ☐ ☐ 2. Accessory structure setbacks:

Front:	Required	_____	Shown	_____
Interior Side:	Required	_____	Shown	_____
Street Side:	Required	_____	Shown	_____
Rear:	Required	_____	Shown	_____
Structure separation:	Required	_____	Shown	_____

☐ ☐ ☐ 3. Lot Coverage: Required _____ Shown _____

☐ ☐ ☐ 4. Height: Required _____ Shown _____

☐ ☐ ☐ 5. Parking: Spaces Required _____ Shown _____

(breakdown by uses for commercial and industrial projects required)

Residential Guest Spaces Required _____ Shown _____

☐ ☐ ☐ Additional Comments Please provide A fully Dimensional site plan DRAWN to Scale. Show proposed + existing structures with setbacks.

OK TO ISSUE AND ENTERED APPROVAL INTO COMPUTER _____ DATE 9/31/04

EDMUND C. FOERSTEL

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M-C
TOYOTA OF CARLSBAD

SHEET:1OF:42
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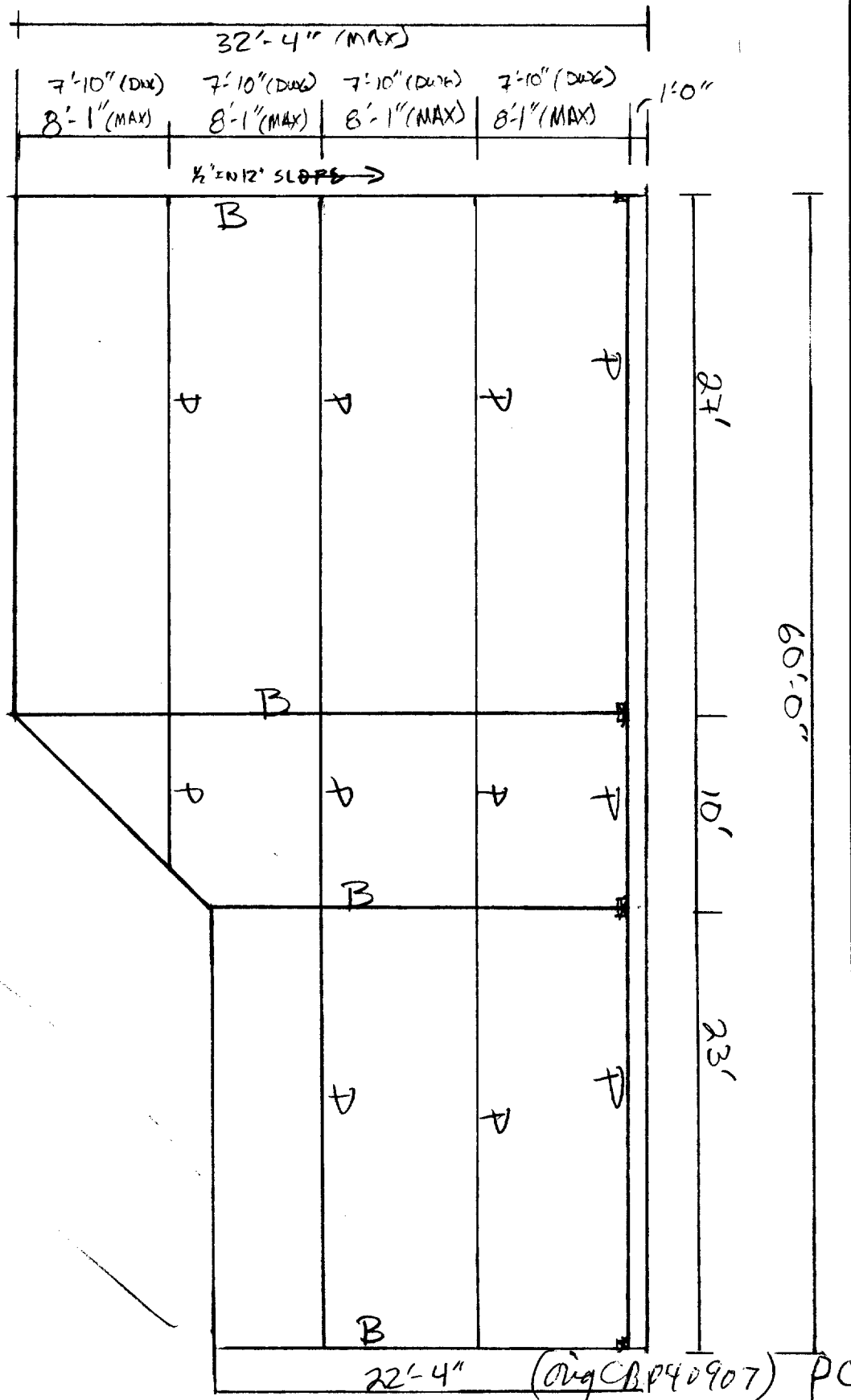
DATE:6/8/2004BY:DKR



JUN 22 2004

REGISTERED PROFESSIONAL ENGINEER
EDMUND C. FOERSTEL
SE 957
Exp. 12-04
STRUCTURAL
STATE OF CALIFORNIA

(Dig CBP40907) PCR04115

10km ≥ R-fault ≥ 5 km

$N_a = 1.0$

$N_v = 1.2$

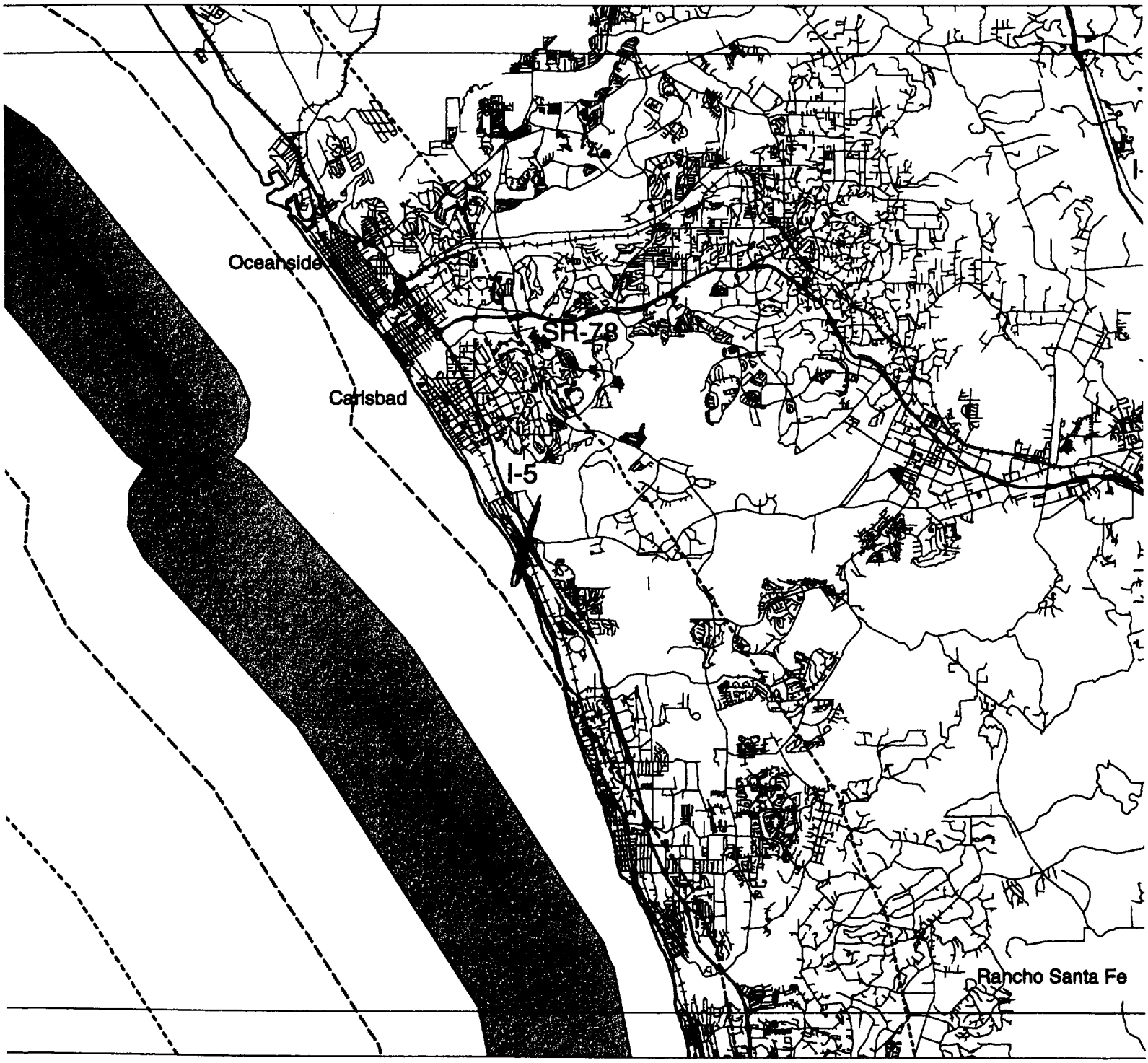
S_D

Active Fault Near-Source Zon

This map is intended to be used in conjunction with the 1997 Uniform Building Code, Tables 16-S and 16-T

)-36

D-35



MAPQUEST.

Send To Printer Back to Map

6030 Avenida Encinas
Carlsbad CA
92009-1061 US

Notes:

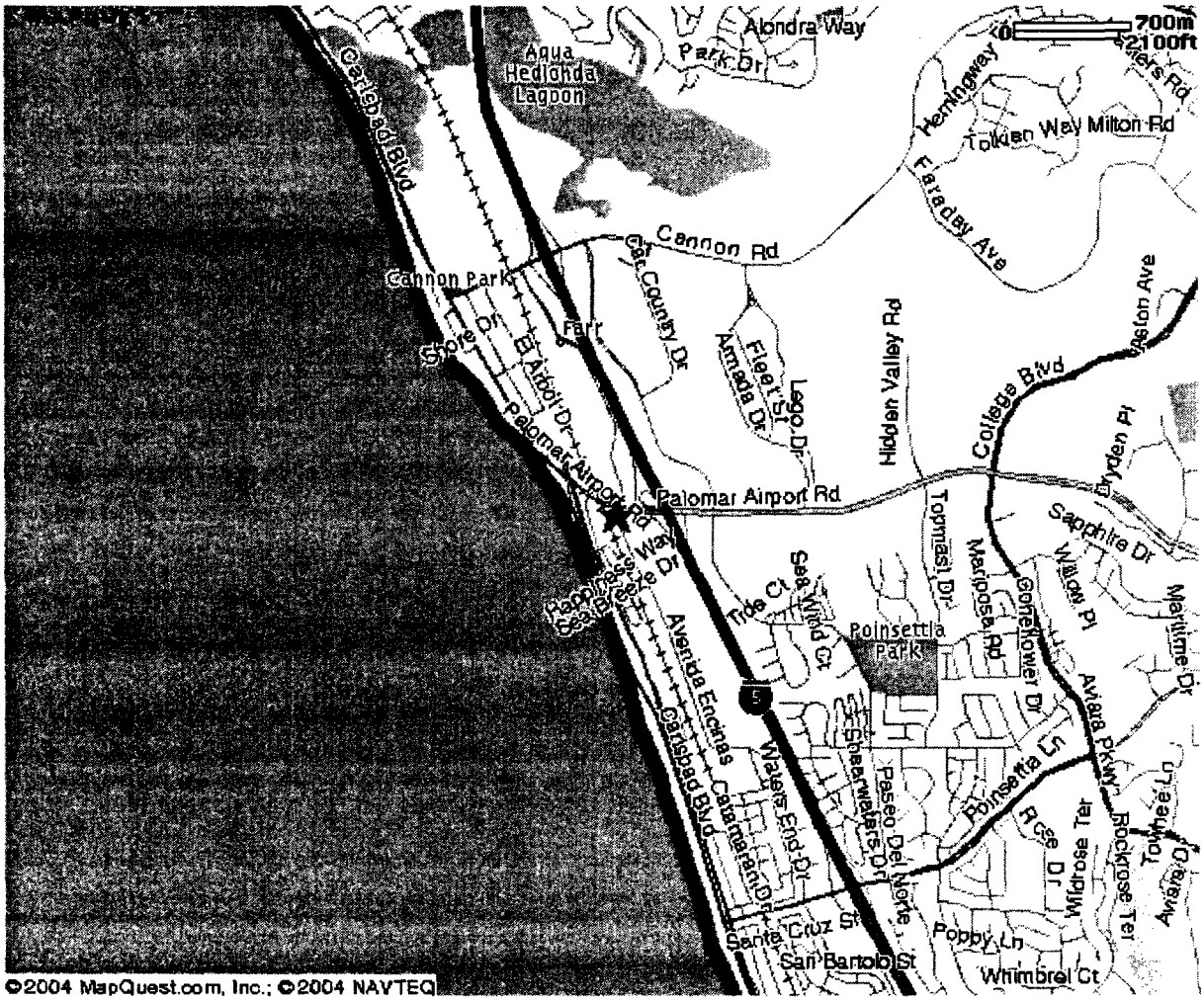


TABLE 3—CARBON STEEL KWIK BOLT-II ALLOWABLE TENSION AND SHEAR VALUES (in pounds), NORMAL-WEIGHT CONCRETE[1,2]

ANCHOR DIAMETER (inch)	ANCHOR DEPTH (inches)	f'c = 2,000 psi			f'c = 3,000 psi			f'c = 4,000 psi			f'c = 6,000 psi		
		Tension			Tension			Tension			Tension		
		With Sp. Insp.	Without Sp. Insp.	Shear	With Sp. Insp.	Without Sp. Insp.	Shear	With Sp. Insp.	Without Sp. Insp.	Shear	With Sp. Insp.	Without Sp. Insp.	Shear
1/4	1 1/8[3]	245	120	400	300	150	400	350	175	400	430	215	400
	2	525	265	400	550	280	400	590	295	400	625	315	400
	3 3/4	625	315	400	625	315	400	625	315	400	625	315	400
3/8	1 5/8[3]	500	250	925	605	300	975	710	355	1,025	800	400	1,025
	2 1/2	1,125	565	1,100	1,210	605	1,100	1,290	645	1,100	1,450	725	1,100
	4 1/4	1,190	595	1,100	1,235	615	1,100	1,285	640	1,100	1,450	725	1,100
1/2	2 1/4[3]	860	430	1,810	960	480	1,840	1,065	530	1,840	1,625	815	1,840
	3 1/2	1,750	875	1,840	2,000	1,000	1,840	2,250	1,125	1,840	2,625	1,315	1,840
	6	1,950	975	1,840	2,165	1,080	1,840	2,375	1,190	1,840	2,625	1,315	1,840
5/8	2 5/8[3]	1,425	710	2,875	1,685	845	2,875	1,950	975	2,875	2,500	1,250	2,875
	4	2,180	1,125	3,125	2,670	1,335	3,125	3,090	1,545	3,125	3,925	1,965	3,125
	7	3,000	1,500	3,125	3,250	1,625	3,125	3,500	1,750	3,125	3,925	1,965	3,125
3/4	3 1/4[3]	1,850	925	3,875	2,175	1,090	3,875	2,500	1,250	3,875	3,000	1,500	3,875
	4 3/4	2,750	1,375	4,225	3,625	1,940	4,225	4,500	2,250	4,225	5,060	2,530	4,225
	8	3,750	1,875	4,225	4,625	2,315	4,225	5,500	2,750	4,225	5,925	2,965	4,225
1	4 1/2[3]	2,930	1,465	6,625	3,650	1,825	7,125	4,375	2,190	7,625	4,360	2,180	8,625
	6	3,990	1,995	8,625	5,310	2,655	8,625	6,625	3,315	8,625	7,875	3,940	8,625
	9	6,040	3,020	8,625	7,050	3,525	8,625	8,055	4,025	8,625	10,000	5,000	8,625

For SI: 1 inch = 25.4 mm, 1 psi = 6.9 kPa, 1 lb. = 4.45 N.

[1]See Table 2 footnotes.

[2]Allowable loads may be increased by 33 1/3 percent for short-term loading due to wind or seismic forces.

[3]Only the long-threaded style KB-II anchor installed at this embedment depth is permitted to be used to resist shear due to wind or seismic forces. Long threaded style KB-II anchors have a thread length greater than three bolt diameters.

TABLE 4—STAINLESS STEEL KWIK BOLT-II ALLOWABLE TENSION AND SHEAR VALUES (in pounds), NORMAL-WEIGHT CONCRETE[1,2]

ANCHOR DIAMETER (inch)	ANCHOR DEPTH (inches)	f'c = 2,000 psi			f'c = 3,000 psi			f'c = 4,000 psi			f'c = 6,000 psi		
		Tension			Tension			Tension			Tension		
		With Sp. Insp.	Without Sp. Insp.	Shear	With Sp. Insp.	Without Sp. Insp.	Shear	With Sp. Insp.	Without Sp. Insp.	Shear	With Sp. Insp.	Without Sp. Insp.	Shear
1/4	1 1/8[3]	170	85	525	230	115	540	245	120	550	350	175	550
	2	425	210	550	500	250	550	500	250	550	520	260	550
	3 3/4	520	260	550	520	260	550	520	260	550	520	260	550
3/8	1 5/8[3]	400	200	825	460	230	950	515	260	1,075	625	315	1,150
	2 1/2	875	440	1,250	1,025	515	1,250	1,175	590	1,250	1,350	675	1,250
	4 1/4	1,000	500	1,250	1,145	625	1,250	1,350	675	1,250	1,350	675	1,250
1/2	2 1/4[3]	800	400	1,700	1,000	500	1,740	1,200	600	1,775	1,250	625	2,085
	3 1/2	1,250	625	2,085	1,625	815	2,085	2,000	1,000	2,085	2,250	1,125	2,085
	6	1,375	690	2,085	1,765	880	2,085	2,150	1,075	2,085	2,550	1,275	2,085
5/8	2 5/8[3]	1,020	510	2,625	1,250	625	2,875	1,475	735	3,125	1,800	900	3,125
	4	1,730	865	3,125	2,220	1,110	3,125	2,715	1,355	3,125	3,000	1,500	3,125
	7	2,250	1,125	3,125	2,825	1,415	3,125	3,425	1,715	3,125	3,425	1,715	3,125
3/4	3 1/4[3]	1,450	725	2,700	1,825	915	3,100	2,200	1,100	3,500	2,450	1,225	4,500
	4 3/4	2,350	1,175	4,225	2,990	1,495	4,365	3,625	1,815	4,500	4,375	2,190	4,500
	8	2,750	1,375	4,500	3,500	1,815	4,500	4,250	2,125	4,500	4,800	2,400	4,500
1	4 1/2[3]	2,300	1,150	5,700	2,850	1,425	6,350	3,400	1,700	7,000	4,500	2,250	7,000
	6	3,740	1,870	7,000	4,930	2,465	7,000	6,120	3,060	7,000	6,875	3,440	7,000
	9	5,250	2,625	7,000	7,075	3,540	7,000	8,800	4,400	7,000	8,800	4,400	7,000

For SI: 1 inch = 25.4 mm, 1 psi = 6.9 kPa, 1 lb. = 4.45 N.

[1]See Table 2 footnotes.

[2]Allowable loads may be increased by 33 1/3 percent for short-term loading due to wind or seismic forces.

[3]Anchors installed at this embedment depth shall not be used to resist shear due to wind or seismic forces.

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M-C
TOYOTA OF CARLSBAD

SHEET:2OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

Dead Loads

Roof Deck	1.00	psf
Purlins	1.50	psf
Beam	1.50	psf
Total	**4.00**	**psf**

Decking

SIMPLE SPAN

Trib. Width (TW) =	1.00	ft	Dead Load (DL) =	1.00	psf
Length (L) =	7.83	ft	Live Load (LL) =	20.00	psf
F_b =	50,000.00	psi	Total Load (TL) =	21.00	psf
w = TL*TW =	21.00	plf			
M= $(w*L^2)/8$ =	161.07	ft-lb			
S_{req} = M/F_b =	**0.0387**	**in^3/ft**			
Use HR-36 AEP 26 gauge		S=	0.0895	in^3/ft	OK

CANTILEVER SPAN

Trib. Width (TW) =	1.00	ft	Dead Load (DL) =	1.00	psf
Length (L) =	1.00	ft	Live Load (LL) =	20.00	psf
F_b	50,000.00	psi	Total Load (TL) =	21.00	psf
w = TL*TW =	21.00	plf			
M= $(w*L^2)2$ =	10.50	ft-lb			
S_{req} = M/F_b =	0.0025	in^3/ft	SIMPLE SPAN GOVERNS		

PURLINS

Trib. Width (TW) =	8.08	ft	Dead Load (DL) =	2.50	psf
Length (L) =	27.00	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	218.25	ft^2	Total Load (TL) =	18.50	psf
F_b	30,000.00	psi			
w = TL*TW =	149.54	plf			

DECKING
HR-36 AEP 26 GAUGE

PURLINS
10 C 12 X 3.25 AEP
OR
12 C 14 X 4
POWERS

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TOYOTA OF CARLSBAD

PURLINS

$V_L=V_R=(w*L)/2=$	2,018.81	lb			
$M=(w*L^2)/8=$	13,626.98	ft-lb			
$S_{req}=M/F_b=$	**5.4508**	**in^3**			
Use 10C12X3.25 AEP		S=	5.5270	in^3	OK
OR					
Use 12C14X4 POWERS		S=	5.5470	in^3	OK

BEAM

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	32.33	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	598.17	ft^2	Total Load (TL) =	20.00	psf
$F_b=$	30,000.00	psi			
$w=TL*TW=$	370.00	plf			
V_L OR $V_R=(w*L)/2=$	5,981.67	lb			
$M=(w*L^2)/8=$	48,351.81	ft-lb			
$S_{req}=M/F_b=$	**19.3407**	**in^3**			

USING 2 SECTIONS

$S_{req\text{-}FOR\ 2}=(M/F_b)/2=$	**9.6704**	**in^3**			
Use 2-17C12X3 AEP		S=	9.6870	in^3	OK
OR					
Use 2-16C12X4 POWERS		S=	11.7000	in^3	OK
OR					
Use 2-12C10X4 POWERS		S=	10.1200	in^3	OK

BEAM

2 - 17 C 12 X 3 AEP

OR

2 - 16 C 12 X 4 POWERS

OR

2 - 12 C 10 X 4 POWERS

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M-C
TOYOTA OF CARLSBAD

SHEET:4OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

COLUMN

COLUMN
2 - 10 C 12 X 3.25
AEP WELDED
TOGETHER

VERTICAL LOADS

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf
F_y =	55,000.00	psi	F_b =	30,000.00	psi

Total Dead Load (TDL) = DL*TA
TDL = 1,196.33 lb

Total Live Load (TLL) = LL*TA
TLL = 4,785.33 lb

Total Vertical Load (TVL) = TDL+TLL
TVL = 5,981.67 lb

WIND LOAD 70 MPH EXP. C

$P = q_s * C_e C_q I_w$

q_s =	12.60			
C_e =	1.06			
C_q =	1.30	horizontal	0.70	upward
I_w =	1.00			

P_H =	17.36	psf
P_U =	9.35	psf

HEIGHT OF ROOF (H) = SLOPE * LENGTH (L)
SLOPE 1/24 L = 32.33 ft

H = 1.35 ft

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Trib. Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf
F_b =	22,000.00	psi	COLUMN HT (CH) =	14.50	ft

NUMBER OF COLUMNS (n) = 2.00

WIND FORCE (W) = $P_H * H * TW/n$

W = 216.37 lb

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M-C
TOYOTA OF CARLSBAD

COLUMN

SEISMIC LOAD

ZONE =	4.00		DESIGN BASE SHEAR		
C_a =	0.44		$V = (C_v*I*W)/(R*T)$ =	2.20	*W
C_v =	0.77		V =	2,629.03	lb
R =	2.20				
I =	1.00		MAX DESIGN SHEAR		
h_n =	15.85		$V = (2.5*C_a*I*W)/(R)$ =	0.50	*W
C_t =	0.02		V =	598.17	lb
T =	0.16				
N_a =	1.00		MIN DESIGN SHEAR (ZONE 4)		
N_v =	1.20		$V = (.8*Z*N_v*I*W)/(R)$ =	0.17	*W
Z =	0.40		V =	208.81	lb
Soil Profile Type =	S_d				
Seismic Source =	B				
Distance To Source =	≥ 5 km				
Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf
			COLUMN HT (CH) =	14.50	ft
W =	DL*TA				
W =	1,196.33	lb			
V_{TOTAL} =	3,320.00	lb	A_B =	1,660.00	ft^2
r_{max} =	V/V_{TOTAL}				
r_{max} =	0.18				
ρ =	$2-((20)/(r_{max}*sqrt(A_B)))$				
ρ =	1.00				
E =	$\rho*V$				
E =	**598.17**	**lb**			
E/1.4 =	**427.26**	**lb**			

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M-C
TOYOTA OF CARLSBAD

SHEET:6OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

COLUMN

STRONG DIRECTION

LOAD CASE 1
D
D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2
D + L
D + L = TVL

LOAD CASE 3
D+(W or E/1.4)
D+(W or E/1.4) = D + E/1.4

LOAD CASE 4
.9D +/- E/1.4
.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5
D + .75*[L+(W or E/1.4)]
D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY 2 - 10 C 12 X 3.25 AEP

A =	2.59	in^2			
S_x =	11.05	in^3	S_y =	2.38	in^3
r_x =	7.71	in	r_y =	2.41	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L = TVL
D + L = 5,981.67 lb

M = NONE
M = 0.00 ft-lb

f_a =	TVL/A		f_b =	M/S	
f_a =	2,311.31	psi	f_b =	0.00	

Kl/r = 47.38

F_a =	24,752.89	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤ 1.00
fa/Fa + fb/Fb = 0.09 OK
fa/Fa - fb/Fb = 0.09 OK

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COLUMN

STRONG DIRECTION

LOAD CASE 3 GOVERNS

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**1,196.33**	**lb**	VERTICAL LOAD
E/1.4 =	**427.26**	**lb**	HORIZONTAL LOAD
M =	(E/1.4)*l		
M =	6,195.30	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	462.26	psi	f_b =	6,725.49	psi
Kl/r =	47.38				
F_a =	24,752.89	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.2429**	**OK**
fa/Fa - fb/Fb =	**-0.21**	**OK**

LOAD CASE 5

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*E/1.4

D =	TDL	
D =	1,196.33	lb
.75*L =	.75*TLL	
.75*L =	3,589.00	lb
VL =	D+.75*L	
VL =	4,785.33	lb
.75*(E/1.4) =	.75*(E/1.4)	
.75*(E/1.4) =	320.45	lb
M =	(.75*(E/1.4))*l	
M =	4,646.47	ft-lb

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TOYOTA OF CARLSBAD

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COLUMN

STRONG DIRECTION

LOAD CASE 5

f_a =	VL/A		f_b =	M/S	
f_a =	1,849.05	psi	f_b =	5,044.12	psi
Kl/r =	47.38				
F_a =	24,752.89	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.2428**	**OK**
fa/Fa - fb/Fb =	**-0.09**	**OK**

WEAK DIRECTION

LOAD CASE 1
D
D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2
D + L
D + L = TVL

LOAD CASE 3
D+(W or E/1.4)
D+(W or E/1.4) = D + E/1.4

LOAD CASE 4
.9D +/- E/1.4
.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5
D + .75*[L+(W or E/1.4)]
D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY 2 - 10 C 12 X 3.25 AEP

A =	2.59	in^2			
S_x =	11.05	in^3	S_y =	2.38	in^3
r_x =	7.71	in	r_y =	2.41	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L =	TVL	
D + L =	5,981.67	lb

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COLUMN

WEAK DIRECTION

LOAD CASE 2

M =	NONE				
M =	0.00	ft-lb			
f_a =	TVL/A		f_b =	M/S	
f_a =	2,311.31	psi	f_b =	0.00	
Kl/r =	151.87				
F_a =	6,471.67	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.00**	
fa/Fa + fb/Fb =	**0.36**	**OK**
fa/Fa - fb/Fb =	**0.36**	**OK**

LOAD CASE 3 GOVERNS

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**1,196.33**	**lb**	VERTICAL LOAD
E/1.4 =	**427.26**	**lb**	HORIZONTAL LOAD
M =	(E/1.4)*l		
M =	6,195.30	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	462.26	psi	f_b =	31,210.57	psi
Kl/r =	151.87				
F_a =	6,471.67	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**1.11**	**OK**
fa/Fa - fb/Fb =	**-0.97**	**OK**

LOAD CASE 5

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

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COLUMN

WEAK DIRECTION

LOAD CASE 5

D =	TDL				
D =	1,196.33	lb			
.75*L =	.75*TLL				
.75*L =	3,589.00	lb			
VL =	D+.75*L				
VL =	4,785.33	lb			
.75*(E/1.4) =	.75*(E/1.4)				
.75*(E/1.4) =	320.45	lb			
M =	(.75*(E/1.4))*l				
M =	4,646.47	ft-lb			
f_a =	VL/A		f_b =	M/S	
f_a =	1,849.05	psi	f_b =	23,407.93	psi
Kl/r =	151.87				
F_a =	6,471.67	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**1.07**	**OK**
fa/Fa - fb/Fb =	**-0.49**	**OK**

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M-C
TOYOTA OF CARLSBAD

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ALT. COLUMN

ALT. COLUMN
HSS 6 X 6 X 1/8

VERTICAL LOADS

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf
F_y =	46,000.00	psi	F_b =	22,000.00	psi

Total Dead Load (TDL) = DL*TA
TDL = 1,196.33 lb

Total Live Load (TLL) = LL*TA
TLL = 4,785.33 lb

Total Vertical Load (TVL) = TDL+TLL
TVL = 5,981.67 lb

WIND LOAD 70 MPH EXP. C

$P = q_s * C_e C_q I_w$

q_s =	12.60			
C_e =	1.06			
C_q =	1.30	horizontal	0.70	upward
I_w =	1.00			

P_H = 17.36 psf
P_U = 9.35 psf

HEIGHT OF ROOF (H) = SLOPE * LENGTH (L)
SLOPE 1/24 L = 32.33 ft

H = 1.35 ft

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Trib. Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf
F_b =	22,000.00	psi	COLUMN HT (CH) =	14.50	ft

NUMBER OF COLUMNS (n) = 2.00

WIND FORCE (W) = $P_H * H * TW/n$

W = 216.37 lb

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M-C
TOYOTA OF CARLSBAD

SHEET:12OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

ALT. COLUMN

SEISMIC LOAD

ZONE =	4.00		DESIGN BASE SHEAR		
C_a =	0.44		$V = (C_v*I*W)/(R*T)$ =	2.20	*W
C_v =	0.77		V =	2,629.03	lb
R =	2.20				
I =	1.00		MAX DESIGN SHEAR		
h_n =	15.85		$V = (2.5*C_a*I*W)/(R)$ =	0.50	*W
C_t =	0.02		V =	598.17	lb
T =	0.16				
N_a =	1.00		MIN DESIGN SHEAR (ZONE 4)		
N_v =	1.20		$V = (.8*Z*N_v*I*W)/(R)$ =	0.17	*W
Z =	0.40		V =	208.81	lb
Soil Profile Type =	S_d				
Seismic Source =	B				
Distance To Source =	≥ 5 km				

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf
F_b =	22,000.00	psi	COLUMN HT (CH) =	14.50	ft

W =	DL*TA	
W =	1,196.33	lb
V_{TOTAL} =	3,320.00	lb
A_B =	1,660.00	ft^2
r_{max} =	V/V_{TOTAL}	
r_{max} =	0.18	
ρ =	$2-((20)/(r_{max}*sqrt(A_B)))$	
ρ =	1.00	
E =	$\rho*V$	
E =	**598.17**	**lb**
E/1.4 =	**427.26**	**lb**

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ALT. COLUMN

STRONG DIRECTION

LOAD CASE 1

D

D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2

D + L

D + L = TVL

LOAD CASE 3

D+(W or E/1.4)

D+(W or E/1.4) = D + E/1.4

LOAD CASE 4

.9D +/- E/1.4

.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5

D + .75*[L+(W or E/1.4)]

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY A HSS 6 X 6 X 1/8

A =	2.70	in^2			
S_x =	5.15	in^3	S_y =	5.15	in^3
r_x =	2.39	in	r_y =	2.39	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L = TVL

D + L = 5,981.67 lb

M = NONE

M = 0.00 ft-lb

f_a =	TVL/A		f_b =	M/S	
f_a =	2,215.43	psi	f_b =	0.00	
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤ 1.00

fa/Fa + fb/Fb = 0.35 OK

fa/Fa - fb/Fb = 0.35 OK

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M-C
TOYOTA OF CARLSBAD

ALT. COLUMN

STRONG DIRECTION

LOAD CASE 3

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**1,196.33**	**lb**	VERTICAL LOAD
E/1.4	**427.26**	**lb**	HORIZONTAL LOAD
M =	(E/1.4)*l		
M =	6,195.30	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	443.09	psi	f_b =	14,435.64	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.73**	**OK**
fa/Fa - fb/Fb =	**-0.59**	**OK**

LOAD CASE 5 GOVERNS

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

D =	TDL	
D =	1,196.33	lb
.75*L =	.75*TLL	
.75*L =	3,589.00	lb
VL =	D+.75*L	
VL =	4,785.33	lb
.75*(E/1.4) =	.75*(E/1.4)	
.75*(E/1.4) =	320.45	lb
M =	(.75*(E/1.4))*l	
M =	4,646.47	ft-lb

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ALT. COLUMN

STRONG DIRECTION

LOAD CASE 5

f_a =	VL/A		f_b =	M/S	
f_a =	1,772.35	psi	f_b =	10,826.73	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤ 1.33 DUE TO LATERAL
fa/Fa + fb/Fb = 0.77 OK
fa/Fa - fb/Fb = -0.21 OK

WEAK DIRECTION

LOAD CASE 1
D
D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2
D + L
D + L = TVL

LOAD CASE 3
D+(W or E/1.4)
D+(W or E/1.4) = D + W

LOAD CASE 4
.9D +/- E/1.4
.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5
D + .75*[L+(W or E/1.4)]
D + .75*[L+(W or E/1.4)] = D + .75*L + .75*W

TRY A HSS 6 X 6 X 1/8

A =	2.70	in^2			
S_x =	5.15	in^3	S_y =	5.15	in^3
r_x =	2.39	in	r_y =	2.39	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L =	TVL	
D + L =	5,981.67	lb

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ALT. COLUMN

WEAK DIRECTION

LOAD CASE 2

M =	NONE				
M =	0.00	ft-lb			
f_a =	TVL/A		f_b =	M/S	
f_a =	2,215.43	psi	f_b =	0.00	
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.00**	
fa/Fa + fb/Fb =	**0.35**	**OK**
fa/Fa - fb/Fb =	**0.35**	**OK**

LOAD CASE 3

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**1,196.33**	**lb**	VERTICAL LOAD
E/1.4 =	**427.26**	**lb**	HORIZONTAL LOAD
M =	(E/1.4)*l		
M =	6,195.30	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	443.09	psi	f_b =	14,435.64	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.73**	**OK**
fa/Fa - fb/Fb =	**-0.59**	**OK**

LOAD CASE 5 GOVERNS

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

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WEAK DIRECTION

LOAD CASE 5

D =	TDL				
D =	1,196.33	lb			
.75*L =	.75*TLL				
.75*L =	3,589.00	lb			
VL =	D+.75*L				
VL =	4,785.33	lb			
.75*(E/1.4) =	.75*(E/1.4)				
.75*(E/1.4) =	320.45	lb			
M =	(.75*(E/1.4))*l				
M =	4,646.47	ft-lb			
f_a =	VL/A		f_b =	M/S	
f_a =	1,772.35	psi	f_b =	10,826.73	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.77**	**OK**
fa/Fa - fb/Fb =	**-0.21**	**OK**

FOOTING

LATERAL

TRY 24" DIAMETER BY 5'-0" DEEP

A = $(2.34*P)/S_1*b$

d = A/2 * (1+ SQRT(1 + (4.36*h)/A)))

P =	427.26	GOVERNING LATERAL LOAD	
PASSIVE =	100.00		
DEPTH =	**5.00**		
S_1 =	166.67		
DIAMETER =	2.00	ft	
b =	2.00	ft	
HEIGHT (h) =	14.50	ft	

FOOTING
24" DIAMETER BY 5'-0" DEEP
EMBED COLUMN 4'-0"
OK FOR TOTAL LOAD
OK FOR UPLIFT

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M-C
TOYOTA OF CARLSBAD

SHEET:18OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

FOOTING

A =	1.12	
d =	4.82	OK

TOTAL LOAD

Trib. Width (TW) =	18.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	16.17	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	299.08	ft^2	Total Load (TL) =	20.00	psf

TOTAL DOWNWARD LOAD (TDL) = TL*TA

TDL = 5,981.67 lb

SKIN FRICTION (SK) = CIRCUMFERENCE OF FOOTING * FRICTION WITH SOIL

SK = 5,235.99 lb

END BEARING (B) = END AREA OF THE FOOTING * SOIL BEARING VALUE

SOIL BEARING VALUE = 1,000.00 psf

B = 3,141.59 lb

B+SK = 8,377.58 > 5,981.67 TDL OK

UPLIFT

UPLIFT (U) = P_U*TA

U = 2,796.19 lb

RESISTING DEAD LOAD (RDL)= DL*TA

RDL= 1,196.33 lb

CONCRETE WT (CWT) = VOLUME OF CONCRETE * WT

CWT = 2,356.19

SK = 5,235.99 lb

RDL+CWT+SK = 8,788.52 > 2,796.19 U OK

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CONNECTIONS

PURLIN TO BEAM

PURLIN $V_L=V_R=$ 2,018.81 lb
USING 2 BOLTS
lb/BOLT = $V_{L\text{-}OR\text{-}R}/2$
lb/BOLT = 1,009.41 lb
USE 2 - 1/2" DIAMETER A307 BOLTS

OR

BEAM $V_L=V_R=$ 2,018.81 lb
USING #12 SCREWS
ALLOWABLE #12(V_A) = 657.00 lb
# OF SCREWS (n) = V_L/V_A
n = 3.07

USE 4 - # 12 SCREWS EACH BEAM TO COLUMN

PURLIN TO BEAM
2- 1/2" DIAMETER A307 BOLTS OR 4 - #12 SCREWS EACH PURLIN TO EACH BEAM W/ A 12 GA. CLIP ANGLE

BEAM TO COLUMN

BEAM $V_L=V_R=$ 5,981.67 lb

USING 2 BOLTS
lb/BOLT = $V_{L\text{-}OR\text{-}R}/2$
lb/BOLT = 2,990.83 lb
USE 2 - 1/2" DIAMETER A307 BOLTS

OR

BEAM $V_L=V_R=$ 5,981.67 lb
USING #12 SCREWS
ALLOWABLE #12(V_A) = 657.00 lb
# OF SCREWS (n) = V_L/V_A
n = 9.10

USE 10 - # 12 SCREWS EACH BEAM TO COLUMN

BEAM TO COLUMN
2- 1/2" DIAMETER A307 BOLTS OR 10 - #12 SCREWS EACH BEAM TO EACH COLUMN

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CONNECTIONS

BEAM TO BUILDING

BEAM TO CLIP

BEAM $V_L=V_R=$	5,981.67	lb
USING 2 BOLTS		
lb/BOLT =	$V_{L\text{-}OR\text{-}R}/2$	
lb/BOLT =	2,990.83	lb

USE 2 - 1/2" DIAMETER A307 BOLTS

OR

BEAM $V_L=V_R=$	5,981.67	lb
USING #12 SCREWS		
ALLOWABLE #12(V_A) =	657.00	lb
# OF SCREWS (n) =	V_L/V_A	
n =	9.10	

USE 10 - # 12 SCREWS EACH BEAM TO COLUMN

CLIP TO WALL

BEAM $V_L=V_R=$	5,981.67	lb
KWIK BOLT-II		
ALLOWABLE 5/8"(V_A) =	3,125.00	lb
# OF BOLTS (n) =	V_L/V_A	
n =	1.91	ft

USE 2 - 5/8" DIAMETER KWIK BOLT-II W/ 4" EMBEDMENT INTO THE WALL

OWNER TAKES RESPONSIBILITY FOR ADEQUACY OF BUILDING WALL TO CARRY ADDITIONAL LOADS

BEAM TO BUILDING

BEAM TO CLIP
2- 1/2" DIAMETER A307 BOLTS OR 10 - #12 SCREWS EACH BEAM TO EACH 12 GA. CLIP ANGLE

CLIP TO WALL
2 - 5/8" DIAMETER KWIK BOLT -II W/ 4" EMBEDMENT INTO EXST. WALL

NOTE: OWNER TAKES RESPONSIBILITY FOR ADEQUACY OF BUILDING WALL TO CARRY ADDITIONAL LOADS

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M-C
TOYOTA OF CARLSBAD

SHEET:21OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

CONNECTIONS

DECK PULLOUT

P_U= 9.35 psf

$P_{U\text{-EFFECTIVE}}$= P_U-ROOF DL

$P_{U\text{-EFFECTIVE}}$= 9.35 psf

w= $P_{U\text{-EFFECTIVE}}$*TW

w= 75.57 plf

SCREWS PER FOOT= w/PULLOUT

PULLOUT = 349.00 lb

SCREWS PER FOOT= 0.22

SCREWS PER 15" = 0.27

USE 1-#10 SMS EVERY 15 "

DECK PULLOUT
1-#10 EVERY 15" INTO EACH PURLIN

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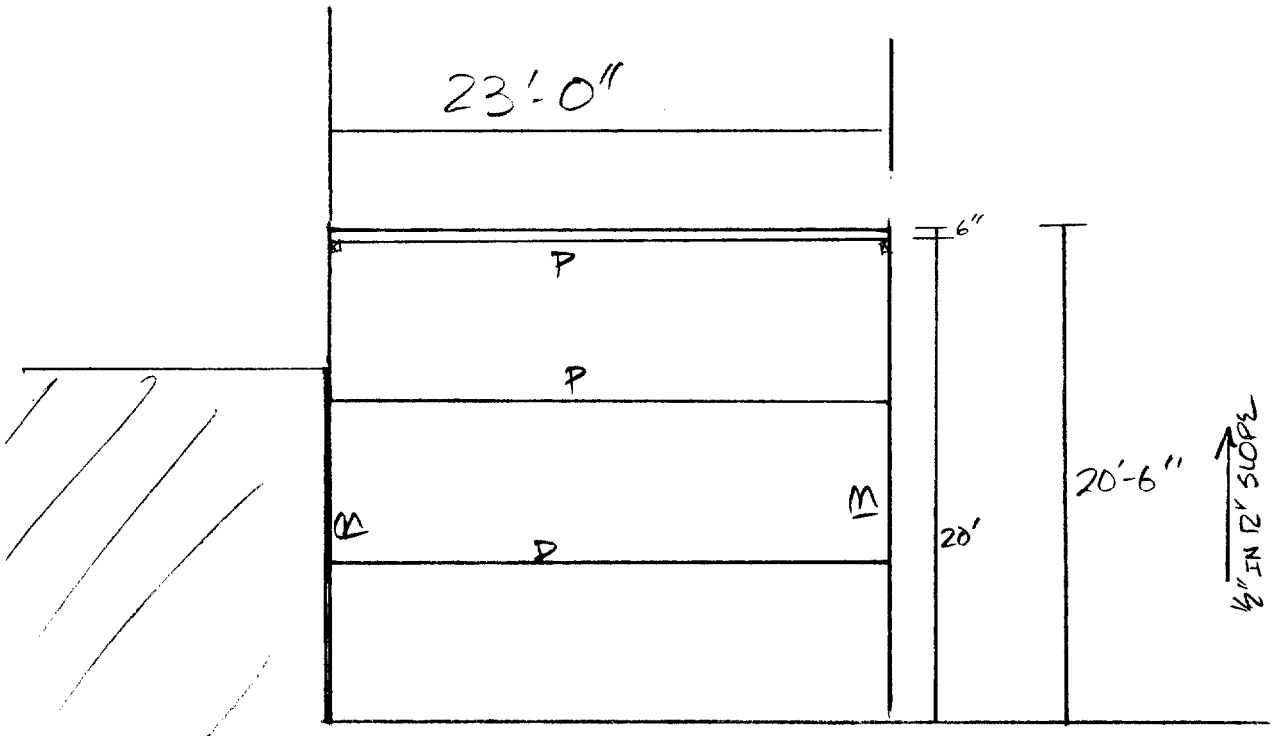

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Dead Loads

Roof Deck	1.00	psf
Purlins	1.50	psf
Beam	1.50	psf
Total	**4.00**	**psf**

Decking

SIMPLE SPAN

Trib. Width (TW) =	1.00	ft	Dead Load (DL) =	1.00	psf
Length (L) =	6.67	ft	Live Load (LL) =	20.00	psf
F_b =	50,000.00	psi	Total Load (TL) =	21.00	psf
w = TL*TW =	21.00	plf			
M= $(w*L^2)/8$ =	116.67	ft-lb			
S_{req} = M/F_b =	**0.0280**	**in^3/ft**			
Use HR-36 AEP 26 gauge		S=	0.0895	in^3/ft	OK

CANTILEVER SPAN

Trib. Width (TW) =	1.00	ft	Dead Load (DL) =	1.00	psf
Length (L) =	0.50	ft	Live Load (LL) =	20.00	psf
F_b	50,000.00	psi	Total Load (TL) =	21.00	psf
w = TL*TW =	21.00	plf			
M= $(w*L^2)2$ =	2.63	ft-lb			
S_{req} = M/F_b =	0.0006	in^3/ft	SIMPLE SPAN GOVERNS		

PURLINS

Trib. Width (TW) =	6.67	ft	Dead Load (DL) =	2.50	psf
Length (L) =	23.00	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	153.33	ft^2	Total Load (TL) =	22.50	psf
F_b	30,000.00	psi			
w = TL*TW =	150.00	plf			

DECKING
HR-36 AEP 26 GAUGE

PURLINS
9 C 12 X 3 AEP
OR
10 C 12 X 2.5 AEP
OR
10 C 12 X 2.5 POWERS

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PURLINS

$V_L=V_R=(w*L)/2=$	1,725.00	lb			
$M=(w*L^2)/8=$	9,918.75	ft-lb			
$S_{req}=M/F_b=$	**3.9675**	**in^3**			
Use 9C12X3 AEP		S=	4.3260	in^3	OK
OR					
Use 10C12X2.5 AEP		S=	4.6850	in^3	OK
OR					
Use 10C12X2.5 POWERS		S=	4.7200	in^3	OK

BEAM

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	20.00	ft	Live Load (LL) =	16.00	psf
Trib. Area (TA) =	230.00	ft^2	Total Load (TL) =	20.00	psf
$F_b=$	30,000.00	psi			
$w=TL*TW=$	230.00	plf			
V_L OR $V_R=(w*L)/2=$	2,300.00	lb			
$M=(w*L^2)/8=$	11,500.00	ft-lb			
$S_{req}=M/F_b=$	**4.6000**	**in^3**			
Use 10C12X2.5 AEP		S=	4.6850	in^3	OK
OR					
Use 10C12X2.5 POWERS		S=	4.7200	in^3	OK

BEAM
10 C 12 X 2.5 AEP
OR
10 C 12 X 2.5
POWERS

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SHEET:25OF:42
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DATE:6/8/2004BY:DKR

COLUMN

COLUMN
2 - 10 C 12 X 3.25
AEP WELDED
TOGETHER

VERTICAL LOADS

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf
F_y =	55,000.00	psi	F_b =	30,000.00	psi

Total Dead Load (TDL) = DL*TA
TDL = 483.00 lb

Total Live Load (TLL) = LL*TA
TLL = 2,415.00 lb

Total Vertical Load (TVL) = TDL+TLL
TVL = 2,898.00 lb

WIND LOAD 70 MPH EXP. C

$P = q_s * C_e C_q I_w$

q_s =	12.60			
C_e =	1.06			
C_q =	1.30	horizontal	0.70	upward
I_w =	1.00			

P_H = 17.36 psf
P_U = 9.35 psf

HEIGHT OF ROOF (H) = SLOPE * LENGTH (L)
SLOPE 1/24 L = 20.50 ft

H = 0.85 ft

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Trib. Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf
F_b =	22,000.00	psi	COLUMN HT (CH) =	14.50	ft
NUMBER OF COLUMNS (n) =	2.00				

WIND FORCE (W) = P_H*H*TW/n

W = 85.28 lb

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M-C
TOYOTA OF CARLSBAD

SHEET:26OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

COLUMN

SEISMIC LOAD

ZONE =	4.00		DESIGN BASE SHEAR		
C_a =	0.44		V = (C_v*I*W)/(R*T) =	2.25	*W
C_v =	0.77		V =	1,086.89	lb
R =	2.20				
I =	1.00		MAX DESIGN SHEAR		
h_n =	15.35		V = (2.5*C_a*I*W)/(R) =	0.50	*W
C_t =	0.02		V =	241.50	lb
T =	0.16				
N_a =	1.00		MIN DESIGN SHEAR (ZONE 4)		
N_v =	1.20		V = (.8*Z*N_v*I*W)/(R) =	0.17	*W
Z =	0.40		V =	84.31	lb
Soil Profile Type =	S_d				
Seismic Source =	B				
Distance To Source =	≥ 5 km				

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf
			COLUMN HT (CH) =	14.50	ft

W =	DL*TA	
W =	483.00	lb
V_{TOTAL} =	943.00	lb
r_{max} =	V/V_{TOTAL}	
r_{max} =	0.26	
ρ =	2-((20)/(r_{max}*sqrt(A_B)))	
ρ =	1.00	
E =	ρ*V	
E =	**241.50**	**lb**
E/1.4 =	**172.50**	**lb**

A_B =	471.50	ft^2

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COLUMN

STRONG DIRECTION

LOAD CASE 1

D

D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2

D + L

D + L = TVL

LOAD CASE 3

D+(W or E/1.4)

D+(W or E/1.4) = D + E/1.4

LOAD CASE 4

.9D +/- E/1.4

.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5

D + .75*[L+(W or E/1.4)]

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY 2 - 10 C 12 X 3.25 AEP

A =	2.59	in^2			
S_x =	11.05	in^3	S_y =	2.38	in^3
r_x =	7.71	in	r_y =	2.41	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L =	TVL				
D + L =	2,898.00	lb			
M =	NONE				
M =	0.00	ft-lb			
f_a =	TVL/A		f_b =	M/S	
f_a =	1,119.78	psi	f_b =	0.00	
Kl/r =	47.38				
F_a =	24,752.89	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.00**	
fa/Fa + fb/Fb =	**0.05**	**OK**
fa/Fa - fb/Fb =	**0.05**	**OK**

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COLUMN

STRONG DIRECTION

LOAD CASE 3

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**483.00**	**lb**	VERTICAL LOAD
E/1.4 =	**172.50**	**lb**	HORIZONTAL LOAD
M =	E/1.4*l		
M =	2,501.25	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	186.63	psi	f_b =	2,715.31	psi
Kl/r =	47.38				
F_a =	24,752.89	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.0980**	**OK**
fa/Fa - fb/Fb =	**-0.08**	**OK**

LOAD CASE 5 GOVERNS

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

D =	TDL	
D =	483.00	lb
.75*L =	.75*TLL	
.75*L =	1,811.25	lb
VL =	D+.75*L	
VL =	2,294.25	lb
.75*(E/1.4) =	.75*(E/1.4)	
.75*(E/1.4) =	129.38	lb
M =	.75*((E/1.4)*l)	
M =	1,875.94	ft-lb

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M-C
TOYOTA OF CARLSBAD

COLUMN

STRONG DIRECTION

LOAD CASE 5

f_a =	VL/A		f_b =	M/S	
f_a =	886.50	psi	f_b =	2,036.48	psi
Kl/r =	47.38				
F_a =	24,752.89	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤ 1.33 DUE TO LATERAL
fa/Fa + fb/Fb = 0.1037 OK
fa/Fa - fb/Fb = -0.03 OK

WEAK DIRECTION

LOAD CASE 1
D
D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2
D + L
D + L = TVL

LOAD CASE 3
D+(W or E/1.4)
D+(W or E/1.4) = D + E/1.4

LOAD CASE 4
.9D +/- E/1.4
.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5
D + .75*[L+(W or E/1.4)]
D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY 2 - 10 C 12 X 3.25 AEP

A =	2.59	in^2			
S_x =	11.05	in^3	S_y =	2.38	in^3
r_x =	7.71	in	r_y =	2.41	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L =	TVL	
D + L =	2,898.00	lb

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M-C
TOYOTA OF CARLSBAD

COLUMN

WEAK DIRECTION

LOAD CASE 2

M =	NONE				
M =	0.00	ft-lb			
f_a =	TVL/A		f_b =	M/S	
f_a =	1,119.78	psi	f_b =	0.00	
Kl/r =	151.87				
F_a =	6,471.67	psi	F_b =	30,000.00	psi
fa/Fa +/- fb/Fb ≤	**1.00**				
fa/Fa + fb/Fb =	**0.17**	**OK**			
fa/Fa - fb/Fb =	**0.17**	**OK**			

LOAD CASE 3

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**483.00**	**lb**	VERTICAL LOAD
E/1.4 =	**172.50**	**lb**	HORIZONTAL LOAD
M =	E/1.4*l		
M =	2,501.25	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	186.63	psi	f_b =	12,600.76	psi
Kl/r =	151.87				
F_a =	6,471.67	psi	F_b =	30,000.00	psi
fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL			
fa/Fa + fb/Fb =	**0.4489**	**OK**			
fa/Fa - fb/Fb =	**-0.39**	**OK**			

LOAD CASE 5 GOVERNS

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

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COLUMN

WEAK DIRECTION

LOAD CASE 5

D =	TDL				
D =	483.00	lb			
.75*L =	.75*TLL				
.75*L =	1,811.25	lb			
VL =	D+.75*L				
VL =	2,294.25	lb			
.75*(E/1.4) =	.75*(E/1.4)				
.75*(E/1.4) =	129.38	lb			
M =	.75*(E/1.4)*I				
M =	1,875.94	ft-lb			
f_a =	VL/A		f_b =	M/S	
f_a =	886.50	psi	f_b =	9,450.57	psi
Kl/r =	151.87				
F_a =	6,471.67	psi	F_b =	30,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.4520**	**OK**
fa/Fa - fb/Fb =	**-0.18**	**OK**

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M-C
TOYOTA OF CARLSBAD

SHEET:32OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

ALT. COLUMN

ALT. COLUMN
HSS 6 X 6 X 1/8

VERTICAL LOADS

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf
F_y =	46,000.00	psi	F_b =	22,000.00	psi

Total Dead Load (TDL) = DL*TA
TDL = 483.00 lb

Total Live Load (TLL) = LL*TA
TLL = 2,415.00 lb

Total Vertical Load (TVL) = TDL+TLL
TVL = 2,898.00 lb

WIND LOAD 70 MPH EXP. C

$P = q_s * C_e C_q I_w$

q_s =	12.60			
C_e =	1.06			
C_q =	1.30	horizontal	0.70	upward
I_w =	1.00			

P_H = 17.36 psf
P_U = 9.35 psf

HEIGHT OF ROOF (H) = SLOPE * LENGTH (L)
SLOPE 1/24 L = 20.50 ft

H = 0.85 ft

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Trib. Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf
F_b =	22,000.00	psi	COLUMN HT (CH) =	14.50	ft
NUMBER OF COLUMNS (n) =	2.00				

WIND FORCE (W) = P_H*H*TW/n

W = 85.28 lb

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ALT. COLUMN

SEISMIC LOAD

ZONE =	4.00		DESIGN BASE SHEAR		
C_a =	0.44		$V = (C_v*I*W)/(R*T)$ =	2.25	*W
C_v =	0.77		V =	1,086.89	lb
R =	2.20				
I =	1.00		MAX DESIGN SHEAR		
h_n =	15.35		$V = (2.5*C_a*I*W)/(R)$ =	0.50	*W
C_t =	0.02		V =	241.50	lb
T =	0.16				
N_a =	1.00		MIN DESIGN SHEAR (ZONE 4)		
N_v =	1.20		$V = (.8*Z*N_v*I*W)/(R)$ =	0.17	*W
Z =	0.40		V =	84.31	lb
Soil Profile Type =	S_d				
Seismic Source =	B				
Distance To Source =	≥ 5 km				

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf
F_b =	22,000.00	psi	COLUMN HT (CH) =	14.50	ft

W =	DL*TA	
W =	483.00	lb
V_{TOTAL} =	943.00	lb
A_B =	471.50	ft^2
r_{max} =	V/V_{TOTAL}	
r_{max} =	0.26	
ρ =	$2-((20)/(r_{max}*sqrt(A_B)))$	
ρ =	1.00	
E =	$\rho*V$	
E =	**241.50**	**lb**
E/1.4 =	**172.50**	**lb**

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ALT. COLUMN

STRONG DIRECTION

LOAD CASE 1

D

D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2

D + L

D + L = TVL

LOAD CASE 3

D+(W or E/1.4)

D+(W or E/1.4) = D + E/1.4

LOAD CASE 4

.9D +/- E/1.4

.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5

D + .75*[L+(W or E/1.4)]

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY A HSS 6 X 6 X 1/8

A =	2.70	in^2			
S_x =	5.15	in^3	S_y =	5.15	in^3
r_x =	2.39	in	r_y =	2.39	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L = TVL

D + L = 2,898.00 lb

M = NONE

M = 0.00 ft-lb

f_a =	TVL/A		f_b =	M/S
f_a =	1,073.33	psi	f_b =	0.00

Kl/r = 152.89

F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤ 1.00

fa/Fa + fb/Fb = 0.17 OK

fa/Fa - fb/Fb = 0.17 OK

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ALT. COLUMN

STRONG DIRECTION

LOAD CASE 3

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**483.00**	**lb**	VERTICAL LOAD
E/1.4 =	**172.50**	**lb**	HORIZONTAL LOAD
M =	E/1.4*l		
M =	2,501.25	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	178.89	psi	f_b =	5,828.16	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.29**	**OK**
fa/Fa - fb/Fb =	**-0.24**	**OK**

LOAD CASE 5 GOVERNS

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

D =	TDL	
D =	483.00	lb
.75*L =	.75*TLL	
.75*L =	1,811.25	lb
VL =	D+.75*L	
VL =	2,294.25	lb
.75*(E/1.4) =	.75*(E/1.4)	
.75*(E/1.4) =	129.38	lb
M =	.75*((E/1.4)*l)	
M =	1,875.94	ft-lb

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ALT. COLUMN

STRONG DIRECTION

LOAD CASE 5

f_a =	VL/A		f_b =	M/S	
f_a =	849.72	psi	f_b =	4,371.12	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤ 1.33 DUE TO LATERAL
fa/Fa + fb/Fb = 0.33 **OK**
fa/Fa - fb/Fb = -0.07 **OK**

WEAK DIRECTION

LOAD CASE 1
D
D = TDL DOES NOT GOVERN LESS THAN LOAD CASE 2

LOAD CASE 2
D + L
D + L = TVL

LOAD CASE 3
D+(W or E/1.4)
D+(W or E/1.4) = D + E/1.4

LOAD CASE 4
.9D +/- E/1.4
.9D +/- E/1.5 = .9D +/- E/1.4 DOES NOT GOVERN LESS THAN LOAD CASE 3

LOAD CASE 5
D + .75*[L+(W or E/1.4)]
D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

TRY A HSS 6 X 6 X 1/8

A =	2.70	in^2			
S_x =	5.15	in^3	S_y =	5.15	in^3
r_x =	2.39	in	r_y =	2.39	in
COLUMN HT (l) =	14.50	ft	K =	2.10	

LOAD CASE 2

D + L =	TVL	
D + L =	2,898.00	lb

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M-C
TOYOTA OF CARLSBAD

ALT. COLUMN

WEAK DIRECTION

LOAD CASE 2

M =	NONE				
M =	0.00	ft-lb			
f_a =	TVL/A		f_b =	M/S	
f_a =	1,073.33	psi	f_b =	0.00	
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi
fa/Fa +/- fb/Fb ≤	**1.00**				
fa/Fa + fb/Fb =	**0.17**	**OK**			
fa/Fa - fb/Fb =	**0.17**	**OK**			

LOAD CASE 3

D+(W or E/1.4) = D + E/1.4

D =	TDL		
D =	**483.00**	**lb**	VERTICAL LOAD
E/1.4 =	**172.50**	**lb**	HORIZONTAL LOAD
M =	E/1.4*l		
M =	2,501.25	ft-lb	

f_a =	TDL/A		f_b =	M/S	
f_a =	178.89	psi	f_b =	5,828.16	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi
fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL			
fa/Fa + fb/Fb =	**0.29**	**OK**			
fa/Fa - fb/Fb =	**-0.24**	**OK**			

LOAD CASE 5 GOVERNS

D + .75*[L+(W or E/1.4)] = D + .75*L + .75*(E/1.4)

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M-C
TOYOTA OF CARLSBAD

SHEET:38OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

ALT. COLUMN

WEAK DIRECTION

LOAD CASE 5

D =	TDL				
D =	483.00	lb			
.75*L =	.75*TLL				
.75*L =	1,811.25	lb			
VL =	D+.75*L				
VL =	2,294.25	lb			
.75*(E/1.4) =	.75*(E/1.4)				
.75*(E/1.4) =	129.38	lb			
M =	.75*(E/1.4)*l				
M =	1,875.94	ft-lb			
f_a =	VL/A		f_b =	M/S	
f_a =	849.72	psi	f_b =	4,371.12	psi
Kl/r =	152.89				
F_a =	6,389.04	psi	F_b =	22,000.00	psi

fa/Fa +/- fb/Fb ≤	**1.33**	DUE TO LATERAL
fa/Fa + fb/Fb =	**0.33**	**OK**
fa/Fa - fb/Fb =	**-0.07**	**OK**

FOOTING

LATERAL

TRY 24" DIAMETER BY 3'-9" DEEP

A = $(2.34*P)/S_1*b$

d = $A/2 * (1+ SQRT(1 + (4.36*h)/A))$

P =	172.50	GOVERNING LATERAL LOAD
PASSIVE =	100.00	
DEPTH =	**3.75**	
S_1 =	125.00	
DIAMETER =	2.00	ft
b =	2.00	ft
HEIGHT (h) =	14.50	ft

FOOTING
24" DIAMETER BY 3'-9" DEEP
EMBED COLUMN 2'-9"
OK FOR TOTAL LOAD
OK FOR UPLIFT

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TOYOTA OF CARLSBAD

FOOTING

A =	0.61	
d =	3.41	OK

TOTAL LOAD

Trib. Width (TW) =	11.50	ft	Dead Load (DL) =	4.00	psf
Length (L) =	10.50	ft	Live Load (LL) =	20.00	psf
Trib. Area (TA) =	120.75	ft^2	Total Load (TL) =	24.00	psf

TOTAL DOWNWARD LOAD (TDL) = TL*TA

TDL = 2,898.00 lb

SKIN FRICTION (SK) = CIRCUMFERENCE OF FOOTING * FRICTION WITH SOIL

SK = 3,926.99 lb

END BEARING (B) = END AREA OF THE FOOTING * SOIL BEARING VALUE

SOIL BEARING VALUE = 1,000.00 psf

B = 3,141.59 lb

B+SK = 7,068.58 > 2,898.00 TDL OK

UPLIFT

UPLIFT (U) = P_U*TA

U = 1,128.92 lb

RESISTING DEAD LOAD (RDL)= DL*TA

RDL= 483.00 lb

CONCRETE WT (CWT) = VOLUME OF CONCRETE * WT

CWT = 1,767.15

SK = 3,926.99 lb

RDL+CWT+SK = 6,177.14 > 1,128.92 U OK

CONNECTIONS

PURLIN TO BEAM

PURLIN V_L=V_R= 1,725.00 lb

USING 2 BOLTS

lb/BOLT = $V_{L\text{-}OR\text{-}R}$/2

lb/BOLT = 862.50 lb

USE 2 - 1/2" DIAMETER A307 BOLTS

OR

PURLIN TO BEAM
2- 1/2" DIAMETER A307 BOLTS OR 4 - #12 SCREWS EACH PURLIN TO EACH BEAM W/ A 12 GA. CLIP ANGLE

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M-C
TOYOTA OF CARLSBAD

SHEET:40OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

CONNECTIONS

PURLIN TO BEAM

PURLIN $V_L=V_R=$	1,725.00	lb
USING #12 SCREWS		
ALLOWABLE #12(V_A) =	657.00	lb
# OF SCREWS (n) =	V_L/V_A	
n =	2.63	

USE 4 # 12 SCREWS EACH BEAM TO COLUMN

BEAM TO COLUMN

BEAM $V_L=V_R=$	2,300.00	lb
USING 2 BOLTS		
lb/BOLT =	$V_{L\text{-}OR\text{-}R}/2$	
lb/BOLT =	1,150.00	lb

USE 2 - 1/2" DIAMETER A307 BOLTS

OR

BEAM $V_L=V_R=$	2,300.00	lb
USING #12 SCREWS		
ALLOWABLE #12(V_A) =	657.00	lb
# OF SCREWS (n) =	V_L/V_A	
n =	3.50	

USE 4 # 12 SCREWS EACH BEAM TO COLUMN

BEAM TO COLUMN
2- 1/2" DIAMETER A307 BOLTS OR 4- #12 SCREWS EACH BEAM TO EACH COLUMN

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M-C
TOYOTA OF CARLSBAD

SHEET:41OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

CONNECTIONS

BEAM TO BUILDING

BEAM TO CLIP

BEAM $V_L=V_R=$	2,300.00	lb
USING 2 BOLTS		
lb/BOLT =	$V_{L\text{-}OR\text{-}R}/2$	
lb/BOLT =	1,150.00	lb

USE 2 - 1/2" DIAMETER A307 BOLTS

OR

BEAM $V_L=V_R=$	2,300.00	lb
USING #12 SCREWS		
ALLOWABLE #12(V_A) =	657.00	lb
# OF SCREWS (n) =	V_L/V_A	
n =	3.50	

USE 4 - # 12 SCREWS EACH BEAM TO COLUMN

CLIP TO WALL

BEAM $V_L=V_R=$	2,300.00	lb
KWIK BOLT-II		
ALLOWABLE 1/2"(V_A) =	1,840.00	lb
# OF BOLTS (n) =	V_L/V_A	
n =	1.25	ft

USE 2 - 1/2" DIAMETER KWIK BOLT-II W/ 3.5" EMBEDMENT INTO THE WALL

OWNER TAKES RESPONSIBILITY FOR ADEQUACY OF BUILDING WALL TO CARRY ADDITIONAL LOADS

BEAM TO BUILDING

BEAM TO CLIP
2- 1/2" DIAMETER A307 BOLTS OR 4 - #12 SCREWS EACH BEAM TO EACH 12 GA. CLIP ANGLE

CLIP TO WALL
2 - 1/2" DIAMETER KWIK BOLT -II W/ 3.5" EMBEDMENT INTO EXST. WALL

NOTE:
OWNER TAKES RESPONSIBILITY FOR ADEQUACY OF BUILDING WALL TO CARRY ADDITIONAL LOADS

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M-C
TOYOTA OF CARLSBAD

SHEET:42OF:42
JOB NO:04D141
DATE:6/8/2004BY:DKR

CONNECTIONS

DECK PULLOUT

P_U= 9.35 psf

$P_{U\text{-EFFECTIVE}}$= P_U-ROOF DL

$P_{U\text{-EFFECTIVE}}$= 8.35 psf

w= $P_{U\text{-EFFECTIVE}}$*TW

w= 55.66 plf

SCREWS PER FOOT= w/PULLOUT

PULLOUT = 349.00 lb

SCREWS PER FOOT= 0.16

SCREWS PER 15" = 0.20

USE 1-#10 SMS EVERY 15 "

DECK PULLOUT
1-#10 EVERY 15" INTO EACH PURLIN